Assessing Psychosocial Vulnerability in Asylum-Seeking and Refugee Populations

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List of Abbreviations

AIDA	Asylum Information Database
EBSCOhost	Elton B. Stephens Co. host
CONTEXT	Collaborative Network for Training and Excellence in Psychotraumatology
BDI	Beck's Depression Inventory
C-PTSD	Complex Post-traumatic Stress Disorder
DESNOS	Disturbances of Extreme Stress Not Otherwise Specified
DP	Direct Provision
DSO	Disturbances in Self-organisation
DSM-III	Diagnostic and Statistical Manual of Mental Disorders III
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders IV
DSM-V	Diagnostic and Statistical Manual of Mental Disorders V
EU	European Union
EC	European Commission
GHQ-12	General Health Questionnaire 12
HSCL-25	Hopkins Symptom Checklist 25
HSE	Health Service Executive
HRSD	Hamilton Rating Scale for Depression
HTQ	Harvard Trauma Questionnaire
IA	Initial Assessment
ICD-11	International Classification of Diseases Version 11
IES	Impact of Event Scale
IPO	International Protection Office
IRCT	International Rehabilitation Council for Torture Victims
LCA	Latent Class Analysis
LEC	Life Events Checklist
MDE	Major Depressive Episodes
MINI	Mini International Neuropsychiatric Interview
MLR	Medico-legal Report

ORAC	Office of the Refugee Applications Commissioner
PCL-C	PTSD Civilian Checklist – Civilian Version
PDS	Post-traumatic Diagnostic Scale
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PTE	Potentially Traumatic Events
PTGI-SF	Post-traumatic Growth Inventory Short Form
PTSD	Post-traumatic Stress Disorder
RAT	Refugee Appeals Tribunal
RLS	Refugee Legal Service
SAD	Seasonal Affective Disorder
UNCAT	United Nations Convention Against Torture
UNHCR	Office of the United Nations High Commissioner for Refugees
SCID PTSD	Structured Clinical Interview for DSM-IV-TR PTSD Module
SIDES	Structured Interview for Disorders of Extreme Stress
SPIRASI	Spiritan Asylum Services Initiative
WHO	World Health Organisation
WHO CIDI	World Health Organisation Composite International Diagnostic Interview

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Abstract

Background

Asylum seekers and refugees are two of the most vulnerable populations worldwide. Studies frequently report of the increased prevalence of mental health disorders among these groups. The literature indicates that Post-traumatic Stress Disorder, Complex Post-traumatic Stress Disorder, Depression, and Anxiety are among the most pervasive disorders. While it is known that psychological morbidity is a salient outcome of forced migration, less is written about the social/environmental factors that affect these outcomes.

Objective

The aim of this thesis was to explore how traumatic exposure in combination with social stressors, specifically those in the host environment, affects mental health outcomes in asylum-seeking and refugee populations in Europe. To this end, this study investigated the relationship between psychosocial vulnerability, traumatic exposure, and mental health outcomes.

Methods:

This study involved a review of the relevant literature and a practical research component, involving the Care Centre for Survivors of Torture in the Republic of Ireland, Spirasi. Using 133 client case files, this study incorporated a quantitative analysis, involving Latent Class Analysis and Multinomial Logistic Regression techniques. Based on the literature, it was predicted that there would be 15 significant variables that, as a whole, would explain psychosocial vulnerability for asylum seekers and refugees in Europe. The study was completed over a 36-month period, from March 2017 to February 2020.

The practical component of the study was completed in conjunction with the care centre for survivors of torture in the Republic of Ireland, Spirasi (Spiritan Asylum Services Initiative). Spirasi offers rehabilitation, psychosocial and educational services to asylum

seekers, refugees, and other disadvantaged migrant groups in the Republic of Ireland. The majority of clients with whom Spirasi works have been exposed to multiple traumatic experiences, largely assaultive and interpersonal, including torture under governmental and civilian duress. Service users present to Spirasi with varied psychological, somatic, and social difficulties owing to their experiences preceding, during, and after migration. The sample used in this study was randomly selected from years 2014 through 2017.

This study used quantitative methodologies to analyse data extracted from *n*=133 service user files. It was hypothesised that 3 latent classes of polyvictimised asylum seekers and refugees could be identified from the dataset and that (1) demographic variables (age, gender, number of children home/Republic of Ireland, and marital status) would be significant predictors of trauma class membership; (2) the level of common mental health disorders (anxiety, depression, and somatisation) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure; (3) the level of trauma related health disorders (PTSD and DSO) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure.

Results:

A systematic review of the literature on post-migration factors and mental health outcomes in asylum-seeking and refugee populations in Europe found that, contrary to common hypothesis, residency status was not independently associated with mental health. Instead, residency was found to be a marker for other explanatory variables. The descriptive data was largely in line with previous research findings, in terms of continents of origin. Both African and Asian nations are shown to be the most frequently cited countries of exile.

Only 8.4% (*n*=11) of participants reached the threshold for probable diagnosis of PTSD. 75.6% (*n*=101) met scores for probable diagnosis of anxiety. The threshold for

probable diagnosis of depression was reached by 73.7% (*n*=98) of participants. Overall, a large proportion of participants (*n*=66, 83.5%) did not meet the requirements for diagnosis with PTSD, C-PTSD, depression, or anxiety. Somatisation was increasingly related to PTSD as opposed to other forms of mental ill-health among asylum seekers and refugees. Three classes of polyvictimised individuals were identified. The largest proportion of participants (*n*= 53, 39.9%,) was found in the 'high risk' category.

Having a history of suicidality or self-harm and depression was found to be a statistically significant predictor of a 'medium' need. A history of suicidality or self-harm, depression, and current suicidal ideation increased one's likelihood of being in the 'high' need category. Both PTSD and C-PTSD were not found to be significant predictors of any of the need categories.

Chapter One: Psychosocial Vulnerability, Common and Stress Related Mental Health Disorders

Introduction

This chapter introduces and explains the 'psychosocial' concept and explores the common and stress related mental health disorders encountered over the course of this research: PTSD, DSO (C-PTSD), depression and anxiety.

Understanding 'Psychosocial'

The term 'psychosocial' denotes the interrelation between psychological functioning and surrounding social environment, which is composed of various interpersonal interactions with individuals and institutions. The term assumes that mental wellbeing or indeed ill-health are related, to a greater or lesser extent, with social influences. Such interactions encompass interpersonal interactions with family, friends, legal institutions, medical services, financial services, and more broadly, interactions that are necessary for maintaining a healthy (psychological and physical) functioning.

Where the ability to carry out these interactions or tasks is impaired for any given reason, and affects mental health and functioning, this is referred to as psychosocial vulnerability. Specifically, this study draws from the UNHCR's (Office of the United Nations High Commissioner for Refugees, 2013) definition of the term "psychosocial" outlined in its text. Here, "psychosocial" is used to depict two interwoven aspects of human functioning, psychological and social environmental, which are severely impacted by conflict and displacement (UNHCR, 2013). "[P]sychosocial denotes the inter-connection between psychological and social processes and the fact that each continually interacts with and influences the other" (UNHCR, 2013).

When applied to asylum-seeking and refugee populations, the term ‘psychosocial’ is especially pertinent for the post-migration phase. The post-migration phase, which refers to life after exile in the host country, gives rise to many social environmental difficulties which are an inherent part of assimilation into a new life. It is known from the literature that these stressors are related to mental health outcomes and, thus, are an integral part of understanding the vulnerability of forced migrants.

Asylum Seekers

An asylum seeker is an individual who flees their country of origin, owing to a fear for safety or threat to life, and seeks international protection in a host country. Under international law every individual has the right to seek asylum. The 1951 Refugee Convention or Geneva Convention guarantees the right to seek asylum, but it does not guarantee that an asylum application will be granted. Applications for asylum must meet the standards set down by each country according to the regulations for individuals seeking international protection. In European member states, the Dublin Regulation states that the first European country in which an application for asylum is made is responsible for the initial and final acceptance or rejection of an individual’s request for protection. Applications for asylum cannot be made in multiple member states.

Refugees

Refugees, like asylum seekers, are individuals who have been forced, for various reasons, to flee their home country. However, unlike asylum seekers, refugees have a different legal status which guarantees their right to residence in the host country. Refugees have been granted legal permission to live, indefinitely, in the country in which they have

applied for asylum. Unlike asylum seekers, refugees are afforded all the rights and benefits of a citizen of their host country.

There are two different types of refugees: convention and programme refugees. A convention refugee is an individual who meets the definition of a refugee under the Geneva Convention. According to this convention, a refugee is defined as an individual:

> owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (United Nations General Assembly, 1951).

A programme refugee is an individual who is assured legal status to reside in a host country, for temporary protection or resettlement, before they leave their country of origin. They enter a host country as part of a resettlement programme and do not undergo the same type of asylum application as those who apply for asylum in the host environment. In the Republic of Ireland alone, there have been several resettlement programmes, involving refugees from Syria, Somalia, and Sudan.

Pre-migration

In the context of this study, the term 'pre-migration' refers to the period before exile. (Chen et al., 2017). Pre-migration trauma refers to the traumatic experience or experiences that force an individual into migration. The reasons for this are varied, but research indicates that they generally relate to experiences such as war, torture by government officials, rebel groups, or civilians, religious persecution, physical assault, sexual assault or rape (Nosé et al.,

2018; Heeren et al., 2014; Schweitzer et al., 2010; McColl & Johnson, 2006; Silove et al., 1997).

Those seeking asylum in 'safe countries' do so where there is an imminent threat to or well-founded fear for their safety should they remain in their country of origin. In order to secure status in a 'safe country' they must prove that relocation to another part of their country of origin was not possible and that the relevant authorities were alerted to this fear if there was a criminal offence committed against them. If the authorities were not contacted, the reasons for this must be valid. Oftentimes a police force or government military have perpetrated the offence and, therefore, state protection is not viable.

Studies published in the field of forced migration and associated traumatic experiences consistently restate the link between pre-migration trauma and psychological morbidity (Ibrahim & Hassan, 2017; Tufan et al., 2013). For example, there is a growing body of evidence reporting a significant association between pre-migration trauma and increased risk of PTSD (Mann & Fazil, 2006).

Peri-migration

Peri-migration refers to the migration journey itself. (Bustamante et al., 2018; Tay et al., 2019; BenEzer & Gader, 2014). It denotes the period from the time of exile until landing in the host country. Studies exploring this aspect of forced migration are limited in comparison to those investigating both pre-migration and post-migration experiences. Peri-migration is more accurately characterized as the journeying stage. Travel from one's country of origin is done either legally or illegally. It is not uncommon for those seeking asylum to travel without documentation or with false documentation and assumed identities.

Journeys take many forms and may be planned or unplanned. The migratory stage presents many dangers for those seeking asylum, especially for those reliant on unreputable means of transport which are often offered by human traffickers for a significant fee. Many potentially traumatic events can occur during this phase, including death of family members and friends, rape, sexual assault, and prostitution (Freedman, 2016a; Salt & Stein, 1997).

Much of the literature speaking to the peri-migration phase was published after 2015. This is largely a reflection of the growing number of forced migrants and the increasingly precarious journeys undertaken by those entering Europe through Italy and Greece from 2015 onwards. In his exploration of female migrants entering Europe from 2015, Freedman (2016a) remarked that it is largely impossible to undertake this journey without assistance from a trafficker. Elsewhere, it has been reported that 89% of asylum seekers have experienced potentially traumatic events while in transit, with more than one event experienced per individual. Exposure to combat, threat of death, kidnapping, and detention are cited as the most common experiences consistent with peri-migratory trauma (Crepet et al., 2017).

Post-migration

The post-migration period refers to the phase of migration after entering the host environment (Li et al., 2016). With this comes a unique set of stressors and difficult experiences, this is elaborated in greater detail throughout Chapter 2. These living difficulties are varied and multifarious and can depend on the types of pre-migration and peri-migration trauma that an individual experienced. Furthermore, the nature of one's status, whether asylum seeker or refugee, can contribute significantly to these difficulties. The

process of integration, assimilation and acculturation into the host environment is a necessary part of the post-migration phase and is a requirement for the asylum application process.

Significant post-migration factors such as legal, financial, and accommodation difficulties are unavoidable in most cases. The level of importance or distress varies from individual to individual. Some specific stressors, such as legal issues, are more prevalent in asylum-seeking groups than refugees, owing to the very nature of their status. Such difficulties are oftentimes prolonged and complex, leading to increased risk factors for common and stress related mental health disorders (Carswell et al., 2011; Laban et al., 2008; Steel et al., 2007; Laban et al., 2007).

PTSD

Post-traumatic Stress Disorder is the only significant mental health disorder for which a cause (index trauma) is claimed to be known (Pitman et al., 2012). It is widely understood as a psychological phenomenon oftentimes with physical indicators or manifestations. Symptoms associated with PTSD generally have a quick onset and develop within 4 to 12 weeks of traumatic exposure. However, in some cases, symptoms may be delayed and manifest years after the event.

PTSD was first theorised in the 1970s as a disorder specific to combat veterans in the US military during the Vietnam war. Before PTSD was officially published as a mental health disorder by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Health Disorder III (DSM-II) 1980, this condition was typically known as ‘combat neurosis’ and ‘shell-shock’.

PTSD symptoms are characterised according to four clusters of symptoms: re-experiencing, avoidance and numbing, alterations in cognitions and mood, hyperarousal. Re-

experiencing includes dreams, flashbacks, intrusive and distressing thoughts of the traumatic event. Avoidance and numbing encompass behaviours that are used to avoid reminders, both internal and external, that evoke psychologically painful or disturbing memories or feelings associated with the traumatic event. Alterations in cognitions and mood are characterised by negative affect, feeling isolated from others, loss of interest in activities, inability to recall aspects of the trauma, negative beliefs about oneself and the world. Hyperarousal pertains to undesirable increased reactions leading to sleep disturbance, difficulties with concentration, irritability, and hypervigilance.

Research suggests that PTSD symptom clusters have varied mechanisms interlinked with interpersonal functioning, somatic or physical functioning, as well as comorbid mental health disorders (Scher et al., 2008). Index traumas for PTSD are not solely limited to conflict, interpersonal, assaultive trauma; they extend to non-assaultive trauma including natural disasters, road traffic accidents, and bereavement.

There are several pre-trauma risk factors which increase an individual's probability of developing PTSD. These include age, gender, childhood maltreatment or abuse, social support and marital or family status. Age is cited as a significant predictor of PTSD (Pineles et al., 2017). Additionally, it is widely known that, while males have a higher incidence of trauma, females are at least twice as likely to develop PTSD (Pineles et al., 2017). This suggests that trauma type and response may be linked to PTSD development. It is known, for instance, that particular types of trauma such as rape and sexual assault are highly gendered, which may account for this phenomenon. The lifetime prevalence of PTSD for females is approximately 10% – 12% and 5% – 6% for men. However, this risk has been shown elsewhere to decrease with an increase in age, particularly for individuals over 55 years (Kessler et al., 1995).

PTSD lifetime prevalence rates vary globally and tend to be lower outside of North America and Canada. The estimated lifetime prevalence in these regions ranges between 6.1% and 9.2% according to national samples of the general adult population (Goldstein et al., 2016; Kessler et al., 2005). According to the Adult Psychiatric Morbidity Survey the lifetime prevalence rate of PTSD in the UK is 3% (McManus et al., 2009). A study of a large-community based sample across 24 countries reported an estimated conditional probability of PTSD related to 29 types of traumatic exposure (Kessler et al., 2014). These were broadly categorised as: sexual violence (33%), interpersonal-network trauma (30%), interpersonal violence (12%), exposure to (3%) and participation in (11%) organised violence, and other life-threatening events (12%)

Complex PTSD and Disturbances in Self-organisation

Complex PTSD (C-PTSD) is theorised as a 'sibling disorder' of PTSD, as outlined in the World Health Organisation's International Classification of Diseases 11th (ICD-11) version (Shevlin et al., 2018). C-PTSD is defined by each of the 6 symptoms of PTSD but with an additional set of symptoms relating to disturbances in self-organisation (DSO). DSO symptoms are related to repeated, prolonged, and varied traumatic exposure as distinct from single traumatic incidences. DSO symptoms are proposed to encompass these differences and are characterised by three symptom clusters: affective dysregulation, negative self-concept, and disturbances in relationships (Ben-Ezra et al., 2018).

C-PTSD was initially characterised as a disorder arising from repeated and prolonged traumatic exposure experienced in the context of captivity under the coercive control of a perpetrator (Herman, 1992). Exposure to significant and recurrent traumas such as childhood abuse and torture are proposed to increase risks in terms of disturbances in self-organisation

(Cloitre et al., 2013). Symptoms of affective or emotional dysregulation relate to both hyper- and hypo-activation. These include inappropriate (extreme or ineffectual) reactivity, outbursts, or dissociation.

Negative self-concept is characterised by negative evaluations and views of oneself. Such views are persistent and accompanied by feelings of guilt and shame (Elklit et al., 2014). Disturbances in relationships refer to interpersonal bonds and difficulties in forming and maintaining close relationships. Such symptoms are similar to those posited in the DSM-IV under Disorders of Extreme Stress Not Otherwise specified (DESNOS). DESNOS result from severe and prolonged traumatic exposure. Like C-PTSD, these include experiences such as childhood trauma, torture, and war related trauma.

Recent studies (Hyland et al., 2018; Nickerson et al., 2016; Tay et al., 2015) indicate that C-PTSD is one of the prevalent stress related mental health disorders associated with forced migration, next to PTSD related to trauma exposure. However, prior to 2015 the construct of C-PTSD had not been evaluated in populations exposed to displacement. Studies of C-PTSD related largely to childhood trauma and, in particular, sexual abuse (Resick et al., 2015). This is a finding that has been challenged in more recent literature (Palic et al., 2016). Tay and colleagues (2015) were the first to investigate the factor structure of C-PTSD in relation to a refugee population. While it is a relatively new area of investigation in relation to asylum seekers and refugees, there is some preliminary evidence indicating the construct validity of C-PTSD in trauma exposed, displaced populations (Hyland et al., 2018).

Findings regarding the prevalence rates of C-PTSD among asylum-seeking and refugee populations differ across the limited studies that have been conducted to date. It has been suggested that the myriad stressors faced by asylum seekers and refugees in a post-migration context have the most significant influence on affect regulation, interpersonal

relations, and self-concept (Nickerson et al., 2016). It has also been previously suggested that C-PTSD (36.1%) is more prevalent than PTSD (25.5%) among refugees (Vallières et al., 2018). Elsewhere, additional studies have found that C-PTSD is less likely to occur than PTSD in forced migrant populations (Ter Heide et al., 2016). It has been shown that neither length of stay in the host country nor other socio-demographic factors contribute to the emergence of C-PTSD in refugees (Barbieri et al., 2019).

Depression

In January 2020, the World Health Organisation (WHO) reported that over 264 million people worldwide suffer from depression. Depression is characterised by undesirable changes in mood that persist beyond the norm of expected mood fluctuations. Depressive episodes are described as mild, moderate, or severe and can persist for weeks or even months. WHO (2020) reports two common types of depressive disorders: recurrent depressive disorder and bipolar affective disorder.

Recurrent depressive disorder is repetitive, and episodes persists beyond two weeks. Symptoms include flattened mood or affect, lack of energy and loss of enjoyment in activities that were previously enjoyable. Depending on the severity of symptoms, depressive episodes usually inhibit or interfere with daily functioning. Ability to complete everyday tasks such as washing, dressing, eating, and working may be severely impaired or unmanageable. Bipolar affective disorder differs in terms of an additional manic component which is part of this disorder. Those suffering with bipolar affective disorder experience both manic and depressive episodes which are interspersed with periods of normal mood or affect. As well as experiencing depressed functioning associated with recurrent depressive disorder, bipolar

affective disorder involves scenes of elevated mood or affect, as well as increased energy and engagement in risky behaviours.

Studies of depression reveal several well reported predictors of this disorder which have a global relevance (Van de Velde et al., 2010). It is a widely accepted contention that those who have experienced adverse life events are at a greater risk of experiencing depression (WHO, 2020; Van de Velde et al., 2010; Tiet et al., 2001; Mazure et al., 2000) Among these findings are pervasive gender differences relating to experiences of depression among males and females. As with PTSD, prevalence rates for depression in Western countries are twice as high for females than males. This is true of both clinical and general populations (Kessler et al., 1993). Studies indicate that this finding is also consistent irrespective of location (Hopcroft & Bradley, 2007). Research suggests that gender differences are affected by several factors, including biological and psychosocial elements (Hopcroft & Bradley, 2007). Moreover, these differences are not peculiar to countries where gender inequality is institutionalised (Hopcroft & Bradley, 2007).

Age is another commonly cited predictor of depression, with older (≥65 years) males and females less likely to experience depression in comparison to younger adult populations (Kessler, 2010). Symptom presentation is also known to differ between these two groups (Rodda et al., 2011; Fiske et al., 2009). Cognitive and somatic symptoms are more frequently endorsed by older individuals than younger cohorts. The latter typically display elevated levels of affective symptoms, including a higher prevalence rate of suicidal ideation and suicide. A study of age differences in Major Depressive Episodes (MDE) conducted in 2010 (Kessler et al., 2010) found that differences also extended to the severity of symptoms. For those older than 65 years, duration of depressive episodes was similar to those under 65 years, but the severity of these episodes was shown to be less.

Anxiety

Anxiety disorders are one of the most prevalent mental health disorders worldwide (Bandelow & Michaelis, 2015; Baxter et al., 2012). As with PTSD and depression, women are more likely than their male counterparts to experience anxiety disorders (WHO, 2017). Recent estimates from 2015 suggest that the global prevalence rate for anxiety are between 2.4%, 3.6% and 29.8%, with well over half of those diagnosed being females (Baxter et al., 2013; WHO, 2017). Approximately 264 million people worldwide suffer with some form of anxiety disorder. Anxiety is commonly used as an umbrella term referring to "an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure" (American Psychological Association, 2020). However, there are several types of anxiety disorders which are nuanced in their expression and show distinct manifestations of symptoms that differ from their counterparts.

Among the most common anxiety disorders are: Generalised Anxiety Disorder (GAD), Obsessive Compulsive Disorder (OCD), Panic Disorder, Social Anxiety Disorder (SAD). GAD is the most prevalent type of anxiety disorder and is characterised by excessive worry about general, everyday life and symptoms are often comorbid with other mental health disorders (Peral et al., 2014; Tyrer & Baldwin, 2006; Kessler at al., 2005). Somatic indicators include insomnia, fatigue, digestive discomfort, hyperarousal, irritability, and changes in mood. Anxious tendencies related to GAD are persistent and involve rumination and catastrophising.

Panic disorder, experienced as panic attacks, is characterised by acute, unexpected, and intense psychological and physical symptoms accompanied by extreme fear which is experienced outside of the context of a real or imminent threat or danger (de Jonge et al., 2016). Symptoms are often likened to those of a heart attack, including shortness of breath, dizziness, rapid heartbeat, tightness of the chest, and tingling and numbness in the extremities

(Carleton et al., 2014). Somatic symptoms are accompanied by overwhelming, intense fear, often with dissociative features. Such is the extent of panic symptoms that it has been described as a feeling of impending death (Meuret et al., 2006).

SAD is characterised by an extreme, irrational fear of social interactions. Like other anxiety disorders, SAD is accompanied by intense emotional discomfort, which is oftentimes manifested by overt, physical indicators, including sweating, trembling, blushing, avoidance of eye contact, restlessness, agitated comportment, and stuttering speech (Stein & Stein, 2008). These symptoms often exacerbate the psychological component and extreme self-criticism underlying the disorder and are frequently taken by the individual as confirmation of their anxious preoccupations, for example, worries about appearing foolish, drawing negative attention to oneself, being belittled or judged in public (Woody & Rodriguez, 2000; Vassilopoulos, 2005).

Discussion

There are a variety of factors associated with the experience of seeking asylum and the process of becoming a refugee in Europe. This chapter outlined core concepts that contextualise and explain the rationale behind this thesis. The overarching concern, to assess psychosocial vulnerability, is evidently best served by investigating social environmental factors proper to the asylum process as well as the trauma associated with forced migration. Understanding the interplay between these factors is essential for determining mental health outcomes in asylum-seeking and refugee populations.

It is known that there are several social and legal differences which exist between asylum seekers and refugees, and that such differences should be accounted for when

assessing the vulnerability of these populations. A holistic assessment should acknowledge the pre-migration, peri-migration, and post-migration factors associated with seeking asylum.

For example, the stressors associated with the process of applying for international protection is distinct in many ways from the stress faced by those who are assured their status. Furthermore, pre-migratory and peri-migratory trauma are different from post-migration trauma or stressors, but they combine to influence psychological outcomes. This gives rise to increased rates of PTSD, C-PTSD, depression, and anxiety.

Conclusion

Chapter 1 has outlined core concepts that contextualise and explain the rationale behind this thesis. It has outlined the 'psychosocial' concept, demonstrating how social environmental factors, proper to the asylum process, as well as the trauma associated with forced migration, are key to assessing vulnerability. Chapter 1 has shown how understanding the interplay between these factors is crucial to determining mental health outcomes in asylum-seeking and refugee populations.

Chapter Two: Post-Migration Factors and Mental Health Outcomes in Asylum-Seeking and Refugee Populations in Europe: A Systematic Review

Introduction

In 2018, 70.8 million people were forcibly displaced worldwide (USA for United Nations High Commissioner for Refugees, 2018), including 3.5 million asylum seekers and 25.9 million refugees. The UNHCR reports that two-thirds of all displaced people originate from Syria, Afghanistan, South Sudan, Myanmar, and Somalia. Studies show that asylum seekers and refugees are particularly vulnerable to traumatic experiences which are threefold in nature: pre-migration, peri-migration, and post-migration (Chen et al., 2017). Trauma exposure, in this sense, tends to be cumulative. There is a higher prevalence rate of mental health disorders among these groups when compared with the general population. This is especially notable in terms of post-traumatic stress disorder (PTSD), anxiety, and depression which are often comorbid in these populations (Fazel et al., 2005).

While there is ample evidence of a significant association between pre-migration trauma and psychological difficulties, for example the association between torture and PTSD (Ibrahim & Hassan, 2017; Tufan et al., 2013), less is known about the relationship between post-migration factors and mental health problems (Hynie, 2018). Certain psychosocial variables that are specific to the post-migration context (e.g., legal status) have been shown to compound the psychological effects of pre-migration trauma (Silove et al., 1998). For example, uncertain immigration status has been found to be as strong as predictor of PTSD as pre-migration rape (Chu et al., 2013). Therefore, resettlement into a 'safe' country is not necessarily conducive to improved psychological well-being.

There are several factors that come to prominence following resettlement into a new country for asylum seekers and refugees. These include legal status, the asylum process, family issues, discrimination, socio-religious factors, and unemployment (Laban, 2005). Longitudinal research shows that limitations on employment is a strong risk factor for depression, particularly among males (Beiser & Hou, 2001). This challenge to economic independence results in lower living standards within host countries compared with one's country of origin (Silove et al., 1997).

This chapter examines the most frequently cited post-migration stressors experienced by both asylum-seeking and refugee populations within Europe, and their associations with mental health problems in the context of resettlement into the host environment. The review focuses on European nations as host countries given the large proportion of asylum seekers they intake each year. Of specific interest are the implications of post-migration stressors on psychological morbidity, with a view to understanding the most effective mechanisms for improving psychosocial well-being among these groups within the post-migration context. Additionally, this paper looks at salient pre-migration traumatic exposure which moderate or predict post-migration living difficulties in these populations. In order to facilitate a substantive review, the Cochrane protocol for systematic reviews was implemented throughout the systematic review.

Method

Reviewers

In accordance with Cochrane protocol, this study involved three independent reviewers (Chandler et al., 2012). Reviewers one (CG) and two (RF) were responsible for

screening and selecting all studies, while reviewer three (MS) was recruited as tie-breaker where agreement could not be reached by reviewers one and two when reviewing conflicts.

Review Question

Which post-migration variables have the most significant effect on the mental health of asylum seekers and refugees in Europe, according to the literature?

Scoping Search

Throughout May 2018, reviewer one conducted preliminary database enquiries using USearch. USearch is a web-based resource available through Ulster University's online library services and provided by EBSCOhost (Elton B. Stephens Co. host). This was done to determine the approximate number of studies in relation to the review question and the most appropriate databases to include in the main search. Eight significant resources were identified through the scoping search. These were CINAHL, Cochrane Library, Embase, ERIC, Medline, PsycINFO, PubMed, Scopus, and Web of Science. These databases were chosen by identifying (1) the most popular databases in relation to the number of applicable studies they produced and (2) databases cited in relevant systematic reviews (Bogic et al., 2015; Slewa-Younan et al., 2014; Lindert et al., 2011). These were then used for the main search for this review.

Search Strategy

A systematic literature search of studies examining the relationship between post-migration psychosocial factors and their impact on mental health outcomes in asylum-seeking and refugee populations in Europe was conducted. This search took place on May 22nd, 2018

using the 8 databases noted above (CINAHL, Cochrane Library, Embase, ERIC, Medline, PsycINFO, PubMed, Scopus, and Web of Science). Initial limiters were set to English language studies published between 2000-2018. Exclusion criteria were applied later on in the process. This was done to limit the possibility of selection bias and erroneous omission of any relevant papers (Drucker et al., 2016). The search terms and search strategy were devised with the assistance of two subject librarians.

Thirty keywords were used to search each database. Keywords were categorised according to three concepts: population, predictors, outcomes. These categories were searched using common synonyms for each concept. Firstly, population was entered as refugee*, 'asylum seeker*', immigrant*, migrant*, 'displaced person*', 'displaced people*'. Secondly, predictors were listed as accommodation, housing, 'direct provision', employ*, unemploy*, 'health care', language*, 'socio religio*', communication*, religio*, 'health care', residen*, 'legal status', 'social support*', family. Thirdly, outcomes included 'psychosocial', 'psychosocial vulnerabilit*', 'post migration', 'post settlement', resettlement, 'post flight', postflight, 'mental health', 'mental ill-health', 'mental ill*'.

Spelling variations were used in the search process to ensure all relevant studies were included. Where appropriate, truncation was employed to broaden results. Keywords were combined in a search matrix using Boolean operators. Synonyms for each individual concept were firstly searched together using 'or'. Concepts were then combined using 'and'. This resulted in seven search permutations as illustrated in Table 1.

Table 1: Search terms

Search 1	**Concept 1**	refugee* OR 'asylum seeker*' OR immigrant* OR migrant* OR 'displaced person*' OR 'displaced people*'
Search 2	**Concept 2**	Accommodation OR housing OR 'direct provision' OR employ* OR unemploy* OR 'health care' OR language* OR 'socio religio*' OR communication* OR religio* OR 'health care' OR residen* OR 'legal status' OR 'social support*' OR family
Search 3	**Concept 3**	'psychosocial' OR 'psychosocial vulnerabilit*' OR 'post migration' OR 'post settlement' OR resettlement OR 'post flight' OR postflight
Search 4	**Concept 1+2**	refugee* OR 'asylum seeker*' OR immigrant* OR migrant* OR 'displaced person*' OR 'displaced people*' AND Accommodation OR housing OR 'direct provision' OR employ* OR unemploy* OR 'health care' OR language* OR 'socio religio*' OR communication* OR religio* OR 'health care' OR residen* OR 'legal status' OR 'social support*' OR family
Search 5	**Concept 1+3**	refugee* OR 'asylum seeker*' OR immigrant* OR migrant* OR 'displaced person*' OR 'displaced people*' AND 'psychosocial' OR 'psychosocial vulnerabilit*' OR 'post migration' OR 'post settlement' OR resettlement OR 'post flight' OR postflight
Search 6	**Concept 2+3**	Accommodation OR housing OR 'direct provision' OR employ* OR unemploy* OR 'health care' OR language* OR 'socio religio*' OR communication* OR religio* OR 'health care' OR residen* OR 'legal status' OR 'social support*' OR family AND 'psychosocial' OR 'psychosocial vulnerabilit*' OR 'post migration' OR 'post settlement' OR resettlement OR 'post flight' OR postflight
Search 7	**Concept 1+2+3**	refugee* OR 'asylum seeker*' OR immigrant* OR migrant* OR 'displaced person*' OR 'displaced people*'AND Accommodation OR housing OR 'direct provision' OR employ* OR unemploy* OR 'health care' OR language* OR 'socio religio*' OR communication* OR religio* OR 'health care' OR residen* OR 'legal status' OR 'social support*' OR family AND 'psychosocial' OR 'psychosocial vulnerabilit*' OR 'post migration' OR 'post settlement' OR resettlement OR 'post flight' OR postflight

Selection Criteria and Piloting

Criteria were firstly piloted on May 22nd, 2018. 20 studies were randomly and independently selected through Covidence by both reviewers who tested the selection criteria to evaluate their accuracy for identifying appropriate texts. After this process, changes were made in categories 1 and 5, study population and publication type, respectively. In terms of study population, initially "displaced persons" was entered as a single inclusion criteria. This was subsequently changed to "externally displaced" only, also resulting in two additional exclusion criteria. Reviewers one and two determined these to be "internally displaced persons" and "all displaced persons owing to natural disaster". Publication type was updated to include only peer-reviewed studies. Corresponding exclusion criteria were subsequently redistributed as "book chapters", "conference papers", "theses", "commentaries", "letters", and "replies".

After piloting, studies were selected for inclusion based on eight categories of criteria. These studies were required to meet criteria in all categories: (1) either asylum seekers, refugees, or displaced persons (not owing to natural disasters) who were male or female, in Europe, 18 years and over, had a history of psychological trauma or torture and underwent mental health assessment; (2) post-migration psychosocial factors, either legal, accommodation, education, social, financial, employment, health, informal supports (e.g. family, religious), formal supports (e.g. therapeutic, NGO); (3) publication timeframe 2000-2018; (4) English language; (5) peer-reviewed publications; (6) primary data; (7) outcomes related to post-migration psychosocial stressors and mental health or the dose-response relationship linking pre-migration trauma to post-migration psychosocial vulnerability; (8) quantitative.

Category 1 exclusions included studies which focused on the general population or did not specifically address asylum seekers, refugees, or displaced persons who were male or

female, in Europe, 18 years and over, had a history of psychological trauma or torture and underwent mental health assessment. Category 2 excluded psychosocial factors related to pre-migration and peri-migration contexts. Category 3 eliminated all studies that were published prior to 2000. The decision to impose this limit was based on a preliminary review of the literature which indicated that relevant studies were published from 2000 onwards. Category 4 exclusions specified studies that were not published in English. Non-English language texts were omitted because time limitations did not allow for translation. Category 5 was limited to peer-reviewed studies. Book chapters, conference papers, theses, commentaries, letters, and replies were all excluded.

Category 6 excluded all data other than primary data. The review team agreed that this would avoid overuse of the same data in multiple reviews. Category 7 excluded any outcomes that did not focus on either post-migration psychosocial factors in relation to refugee and asylum seeker mental health or the dose-response link between pre-existing trauma and post-migration psychosocial vulnerability. Category 8 exclusions included systematic reviews, narrative reviews, meta-analyses and meta-syntheses. This was done to avoid reviewing the same data on multiple occasions. All 9,940 studies identified in search seven, the final search strategy (Table 1), were exported to Covidence, an online programme for systematic reviews, launched in 2013 (Veritas Health Innovation Ltd).

Title and Abstract Screening

After duplicates were removed, a total of 6,179 studies remained for title and abstract screening. Reviewers one and two were required to allocate one vote each per study using the Covidence platform. This was either ‘yes’, ‘no’, or ‘maybe’ depending on its match with the selection criteria. Once this stage was completed, 6,099 studies were deemed irrelevant based

on the inclusion and exclusion criteria, leaving a total of 80 papers proceeding to full-text review. These were ‘no mental health component’, ‘insufficient statistical analysis’, ‘does not explicitly refer to study population’, ‘insufficiently specific’, ‘text unavailable from author’, ‘not available in English’, ‘qualitative study’, ‘book chapter’, ‘non-academic study’, ‘seminar paper’, ‘editorial’, ‘outside Europe’, and ‘population under 18’.

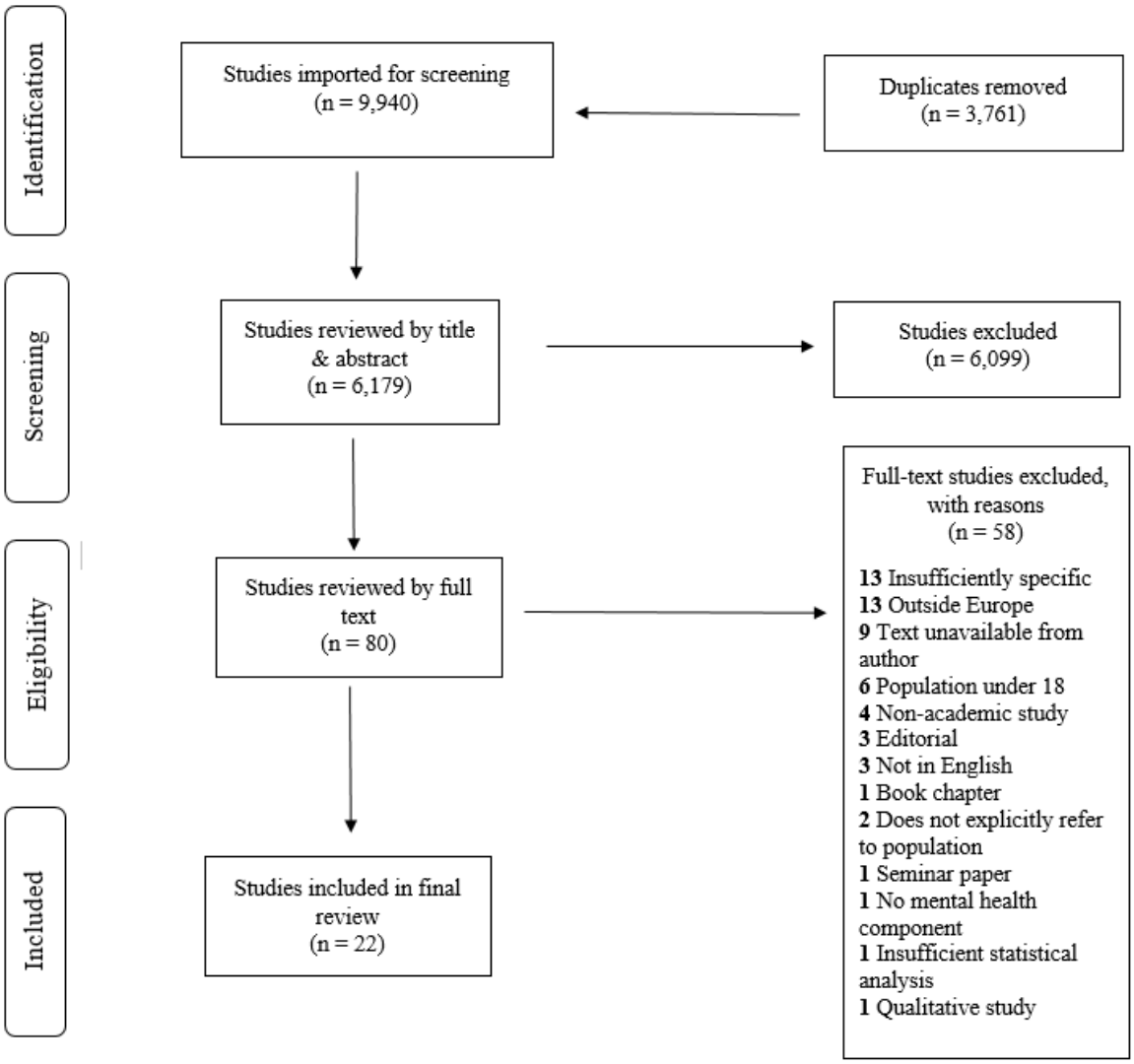
Full-text Screening and Extraction

Reviewers one and two allocated one vote per study, either ‘include’ or ‘exclude’. There were 13 options for excluding studies after full-text screening (figure 1). There were two stages involved in data extraction: pilot extraction and final extraction. Firstly, a pilot extraction was conducted by reviewers 1 and 2. Both independently extracted data from only 10 studies which were randomly chosen from Covidence. For the final extraction phase, each reviewer then independently assessed fifty percent of the remaining papers, with the option to ‘include’ or ‘exclude’ each text.

Quality Assessment

Study quality was assessed twice during the extraction stage (Wells & Littell, 2008; Shea et al., 2007). Firstly, using subjective criteria for inclusion, based on the review protocol. Secondly, using a 19-question assessment schedule to review the overall quality of each text. Both reviewers one and two were responsible for the preliminary assessment. Reviewer one conducted the final quality review after each of the papers were extracted. Each question was assessed using either ‘yes’, ‘no’, ‘somewhat’ or ‘not appropriate’ options. To pass the quality assessment, at least 14 of 19 questions (74%) had to be endorsed with a ‘yes’ vote. All studies passed this assessment.

Figure 1: PRISMA flow-diagram illustrating review process



Results

Twenty-two studies were used for the final review and synthesis. The total sample for these studies was n = 5,572, with individual studies ranging from n = 26 to n = 1,215. In line with the inclusion criteria, studies were limited to European nations that acted as host countries for refugees and asylum seekers from across the globe. Four studies were conducted in Sweden which included the largest proportion of the overall sample (Lecerof et al., 2015; Tinghög et al., 2017; Kivling-Bodén & Sundbom, 2002). The Netherlands accounted for

participants across eight studies (Gerritsen et al., 2005; Laban et al., 2005a; Laban et al., 2005b; Laban et al., 2008; Laban et al., 2007; Lamkaddem et al., 2015; Droždek et al., 2013; Steel et al., 2017). Two studies were conducted in Italy (Bogic et al, 2012; Nosé et al, 2018). Two further studies were conducted in Norway (Teodorescu et al, 2012a; Teodorescu et al, 2012b). Switzerland accounted for participants across three studies (Schick et al., 2016; Heeren et al., 2014; Heeren et al., 2012) and the United Kingdom accounted for participants in two studies (Bogic et al., 2012; Carswell et al., 2011). Additional studies drew participants from the Republic of Ireland (Toar et al., 2009), Finland (Mölsä et al., 2014), Germany (Bogic et al., 2012), and Denmark (Bruhn et al., 2017).

Table 2: Studies included in the literature synthesis

Study (first author and publication year)	Countries	Population	Study design	Post-migration stress measure	Mental health measure	Methodology	Study-quality %
Bogic (2012)	Germany, Italy and the UK	Refugees	Cross-sectional	Amended version of the 24-item Life Stressor Checklist Revised	Mini International Neuropsychiatric Interview (MINI)	Mixed	100%
Bruhn (2018)	Denmark		Longitudinal	Interview	Harvard Trauma Questionnaire (HTQ)	Mixed	90%
Carswell (2011)	UK	Refugees & Asylum seekers	Cross-sectional	Demographic and Post-Migration Living Difficulty Questionnaire; Short Form Social Support Questionnaire (SSQ6); Duke-UNC Functional Social Support Questionnaire (Duke-UNC FSSQ)	Harvard Trauma Questionnaire (HTQ); Hopkins Symptom Checklist-25 (HSCL-25)	Mixed	85%
Droždek (2013)	Netherlands	Refugees & Asylum seekers	Cross-sectional	Interview	Harvard Trauma Questionnaire (HTQ) Hopkins Symptom Checklist-	Quantitative	80%

					25 (HSCL-25)		
Gerritsen (2006)	Netherlands	Refugees & Asylum seekers	Cross-sectional	Self-report questionnaire developed for study	Harvard Trauma Questionnaire (HTQ); Hopkins Symptoms Checklist-25 (HSCL-25);	Quantitative	95%
Heeren (2014)	Switzerland	Refugees & Asylum seekers	Cross-sectional	Index calculated specifically for study; items were based on Heckmann and Schnapper's integration concept; Marlowe-Crowne Social Desirability Scale Short Form X1	Harvard Trauma Questionnaire (HTQ); Posttraumatic Diagnostic Scale (PDS); Hopkins Symptom Checklist-25 (HSCL-25)	Quantitative	95%
Heeren (2012)	Switzerland	Asylum seekers	Cross-sectional	Self-report questionnaire developed for study	Harvard Trauma Questionnaire (HTQ); Posttraumatic Diagnostic Scale; Mini International Neuropsychiatric Interview (MINI)	Mixed	85%

					Post-traumatic stress diagnosis scale; Hopkins Symptom Checklist-25 (HSCL)		
Kivling-Bodén (2002)	Sweden	Refugees	Cross-sectional	Life-in-Exile Questionnaire	Harvard Trauma Questionnaire (HTQ)	Quantitative	75%
Laban (2007)	Netherlands	Asylum seekers	Cross-sectional	World Health Organization Quality of Life-Bref scale (WHOQOL-Bref); Post-Migration Living Problems Checklist (PMLP)	World Health Organization Composite International Diagnostic Interview (CIDI), version 2.1	Mixed	75%
Laban (2005a)	Netherlands	Asylum seekers	Cross-sectional	Interview	World Health Organization Composite International Diagnostic Interview (CIDI), version 2.1;	Mixed	80%
Laban (2005b)	Netherlands	Asylum seekers	Cross-sectional	Interview	World Health Organization Composite International Diagnostic Interview (CIDI), version 2.1	Mixed	75%
Laban (2008)		Asylum seekers	Cross-sectional	Post-Migration Living Problems Checklist	Harvard Trauma Questionnaire (HTQ);	Mixed	75%

	Netherlands			(PMLP); World Health Organization Quality of Life-Bref scale (WHOQOL-Bref)	World Health Organisation Composite International Diagnostic Interview (CIDI), version 2.1		
Lamkaddem (2015)	Netherlands	Refugees & Asylum seekers	Longitudinal	Checklist created for study	Hopkins Symptom Checklist-25 (HSCL) Harvard Trauma Questionnaire (HTQ)	Quantitative	100%
Lecerof (2016)	Sweden	Asylum seekers	Cross-sectional	Questionnaire created for study	General Health Questionnaire (GHQ-12);	Quantitative	75%
Mölsä (2014)	Finland	Refugees	Cross-sectional	Interview; EuroQoL EQ-5D	Beck's Depression Inventory (BDI); General Health Questionnaire (GHQ-12)	Mixed	80%
Nosè (2018)	Italy	Refugees & Asylum seekers	Cross-sectional	Unclear	Life Events Checklist (LEC); General Health Questionnaire (GHQ-12); Mini International Neuropsychiatric Interview	Mixed	85%

					(MINI) Hamilton Rating Scale for Depression (HRSD)		
Schick (2016)	Switzerland	Refugees	Cross-sectional	Post-Migration Living Difficulties Checklist (PMLD)	Harvard Trauma Questionnaire (HTQ); Posttraumatic Diagnostic Scale (PDS); Hopkins Symptom Checklist-25 (HSCL)	Quantitative	100%
Steel (2017)	Sweden	Refugees & Asylum seekers	Cross-sectional	Post-Migration Living Difficulties (PMLD); Cultural Lifestyle Questionnaire	Harvard Trauma Questionnaire (HTQ);	Mixed	100%
Teodorescu (2012a)	Norway	Refugees	Cross-sectional	Questionnaire developed for study	Structured Clinical Interview for DSM-IV-TR PTSD Module (SCID PTSD); MINI International Neuropsychiatric Interview 5.0.0 (MINI); Structured Interview for Disorders of Extreme Stress (SIDES);	Mixed	95%

					Hopkins Symptom Checklist (HSCL-25); Impact of Event Scale Revised (IES-R); Life Events Checklist (LEC)		
Teodorescu (2012b)	Norway	Refugees	Cross-sectional	World Health Organization Quality of Life-Bref scale (WHOQOL-Bref); Questionnaire developed for study	Life Events Checklist (LEC); Structural Clinical Interview for DSM-IV- TR PTSD Module (SCID-PTSD); MINI International Neuropsychiatric Interview 5.0.0 (MINI); Impact of Event Scale-Revised (IES-R); Posttraumatic Growth Inventory Short Form (PTGI-SF); Hopkins Symptom Checklist (HSCL-25)	Mixed	90%
Tinghög (2017)	Sweden	Refugees	Cross-sectional	Seven single item questionnaire developed for study	To identify respondents that had been exposed to refugee-related PTEs before	Quantitative	95%

					arriving to Sweden, two (identical) checklists were developed to cover the pre-migration and peri-migration periods separately; Hopkins Symptom Checklist (HSCL-25); Harvard Trauma Questionnaire (HTQ); WHO-5 Well-being Index (WHO-5)		
Toar (2009)	Republic of Ireland	Refugees & Asylum seekers	Cross-sectional	18 item checklist developed for study	Harvard Trauma Questionnaire (HTQ); Hopkins Symptom Checklist (HSCL-25);	Quantitative	90%

A total of 11 predictors were hypothesised and these were investigated across the twenty-two studies. The following predictors were included insofar as data was reported and explicitly related to mental health outcomes across the studies' populations.

Length of Asylum Process and Duration of Stay

Nine studies investigated length of asylum procedure and duration of stay (Teodorescu et al, 2012a; Nosé et al, 2018; Mölsä et al., 2014; Laban et al., 2005a; Laban et al., 2005b; Laban et al., 2007; Laban et al., 2008; Heeren et al., 2012; Heeren et al., 2014). A protracted asylum process was one of the most frequently cited stressors to occur during the post-migration period. Using data comparing two pre-stratified groups, those resident for less than 6 months and those resident for greater than 2 years, Laban and colleagues (2007) reported the length of the asylum procedure to be an important risk factor for psychiatric morbidity (OR = 2.16, CI = 1.15–4.08). Those who were long-stayers (greater than two years) suffered higher rates of psychiatric disorders than those who had been resident for shorter periods of less than 6 months (62% compared to 42%). It was also the strongest predictor for lower overall quality of life, increased disability, and somatic complaints (Laban et al., 2008).

Despite an increase in psychiatric disorders associated with length of stay, an increase in mental health service use was not observed (Laban et al., 2007). Teodorescu et al. (2012) report four significant inverse correlations between length of stay and current PTSD diagnosis (r = -0.26), depression symptoms (r = -0.27), anxiety symptoms (r = -0.39), general psychological distress (r = -0.35). While Nosé and colleagues (2018) found length of stay to be a protective factor, where the mean duration was thirteen months (Nosé et al, 2018). Contrary to popular research, one study (Heeren et al., 2012) found no correlations between

length of stay and mental health outcomes. This finding was duplicated in a later study by Heeren et al (2014) who reported a significant increased level of anxiety associated with length of stay for refugees only (r = 0.40). Similarly, Mölsä and colleagues (2014) reported only a marginal positive association between duration of stay and depressive symptoms

Residency Status

Three studies reported residency status in relation to mental health outcomes with sufficient detail (Lamkaddem et al., 2015; Hereen et al., 2014; Toar et al., 2009). Strong associations were reported between status and mental health risks, but only in instances where other post-migration stressors were present. Asylum seekers were reported to be at greater risk of PTSD (OR =2.50), depression/anxiety (OR =3.00) symptoms when compared to refugees (Toar et al., 2009). However, after controlling for other pre- and post-migration stressors and other ongoing conditions, residency was no longer associated with PTSD, depression, or anxiety.

Residency status was reported, thus, as a marker for other explanatory variables. Furthermore, Heeren et al. (2014) reported unchanged levels of PTSD between those granted status and those seeking asylum. PTSD was, thus, purportedly unassociated with residency. In other studies, obtaining residency, or refugee status, was found to improve the overall health of this population (Lamkaddem et al., 2015). However, again, further (mediation) analysis showed that improvements were related to an increase in opportunities, resources and supports available as a consequence of gaining refugee status. That is, factors associated with living outside of the asylum system.

Family

Four studies related family status to post-migration psychosocial difficulties among these populations (Bruhn et al., 2017; Tinghög et al., 2017; Lamkaddem et al., 2015; Laban et al., 2006) With an increase in family/social supports related to status, Lamkaddem et al. (2015) reported family/social support as one of the three main mechanisms through which status operates to improve PTSD, anxiety and depression symptomology. Laban et al. (2006) reported that family related issues, including missing one's family, worries about family back home, an inability to go home, and loneliness, had one of the highest odds ratios for at least one psychiatric disorder.

Participants who had been resident ≥2 years scored significantly higher than newly arrived (<6 months). Regarding psychiatric treatment administered in an outpatient setting, family issues were reported as one of the most significant post-migration stressors to interfere with treatment (Bruhn et al., 2017). Additionally, Tinghög et al. (2017) found that stressors related to family life and separation were significantly correlated with mental ill-health. 'Distressing conflicts in family (family conflicts)' was reported to be significantly associated with anxiety, depression, low subjective well-being, and PTSD. While the same was predominantly true of 'feeling sad because not reunited with family members (home country and family concerns)', although this was not significantly associated with anxiety. However, upon conducting a sensitivity analysis, this variable was no longer significantly associated with any mental health outcomes (Tinghög et al., 2017).

Social Integration and Weak Social Network

Three studies looked at the concept of social integration and weak social network in relation to mental health outcomes (Schick et al., 2016; Teodorescu et al., 2012a; Teodorescu

et al., 2012b). In one study, bivariate correlation analysis showed that post-traumatic growth had a strong negative association with poor social integration and weak social network (Teodorescu et al., 2012b). Social network in this instance was measured by the number of good friends that participants had within the host country. This sample consisted of psychiatric outpatients, where the average number of friends reported was 3.0 (range = 0 to 11). Over 25% of the sample had no friends in their reception country. In another study, Teodorescu et al. (2012a) also reported weak social integration into the wider host society to be associated only with psychiatric morbidity and higher levels of psychiatric symptomatology. While weak social integration into one's ethnic community was associated with current PTSD diagnosis.

Regardless of duration of stay, it was reported elsewhere that social integration for refugees was notably lacking and did not improve considerably for long-stayers despite participants being resident for over 10 years (Schick et al., 2016). This was measured using a version of the Post-Migration Living Difficulties Checklist (PMLDC; Silove et al., 1997; Steel et al., 1999) M=20.7 (SD=6.1, scale range 0-28). Social integration problems were significantly associated with health-related quality of life and functional impairment (r = -.47), depressive symptom severity (r = 0.44), PTSD (r = 0.43), and anxiety (r = 0.29). A regression analysis showed that depression and anxiety symptoms predicted difficulties with social integration. Interestingly, integration difficulties were more strongly associated with symptoms of depression and PTSD rather than frequency of traumatic events.

Finance

Only two studies offered any significant insight into post-migration financial difficulties in the context of mental health outcomes (Bruhn et al., 2017; Lecerof et al., 2015).

Conducting a bivariate analysis, Lecerof et al. (2015) reported financial difficulties to increase the risk of mental health decline (OR= 2.35, 95% CI 1.64–3.38). An analysis of effect modification also showed a positive association between mental health outcomes and low social participation co-occurring with financial difficulties. In one study on post-migration stressors and their impact on mental health treatment, Bruhn et al. (2017) found that financial difficulties related to work was the most frequent factor interfering with treatment.

Employment

Four studies explored employment as a significant post-migration factor correlated with mental health outcomes (Steel et al., 2017; Bogic et al., 2012; Teodorescu et al., 2012a; Teodorescu et al., 2012b). In a sample of multi-traumatised psychiatric outpatients from a refugee background, unemployment was shown to explain only 1.5% (F (5,45) = 12.62, p < .001) of the variance for psychological health (Teodorescu et al., 2012b). Rendering this variable an insignificant contributor to overall mental health outcomes. Conversely, in a similar sample of multi-traumatised refugees, unemployment was reported to have the most significant correlations with psychiatric illness and symptom severity (Teodorescu et al., 2012a). This was shown to be particularly true in terms of increase in level of depressive symptoms. In another study, conducted by Bogic et al. (2012), these findings were further endorsed showing mood disorders (major depression, dysthymia, hypomania, and mania) to be associated with unemployment. Furthermore, Steel et al. (2017) found employment status to be significantly correlated with assimilation into the host environment.

Housing and Accommodation

Along with financial difficulties and discrimination, housing problems were shown to increase the risk of mental ill-health in one study (Lecerof et al., 2015). Lecerof et al. (2015) report an odds ratio of 2.79 (95% CI 1.84–4.22) for poor mental health where participants endured housing issues while age, sex, educational level, social participation, and trust in others were controlled for. Together, housing difficulties and low social participation was reported to be the most significant risk factor for poor mental health (Lecerof et al., 2015). Trust in others, conversely, appeared to be a protective factor against declining mental health related to housing difficulties (Lecerof et al., 2015).

Language Proficiency

Across the twenty-two studies, five studies assessed associations between language acquisition/proficiency, social integration, and mental health outcomes (Toar et al., 2017; Schick et al., 2016; Mölsä et al., 2014; Tedorescu et al., 2012a; Laban et al., 2006). It was noted that language difficulties appear among the most salient post-migration stressors experienced by asylum seekers (Toar et al., 2017). Interestingly, Laban et al. (2006) also found, regardless of time spent in the host country for asylum seekers, language proficiency did not differ considerably between two pre-stratified groups based on duration of stay. The mean scores for language problems for those living in the recipient country less than 6 months and greater than 2 years were 55.9 and 51.7, respectively.

Refugees appear to report higher rates of proficiency in terms of ability to communicate in the language native to their host countries. In a sample of traumatised refugees attending outpatient treatment, self-reported medium-high language (host country) proficiency was recorded at 83%. 8.9% scored below this threshold (Tedorescu et al., 2012a).

However, this finding was challenged by Schick et al. (2016) who reported less than 20% of refugee participants had sufficient proficiency to answer questionnaires relating to their migration experiences. Indeed, Mölsä et al. (2014) found language proficiency to be marginally negatively associated with symptoms of depression (β = -.20) among older refugees (50 – 80 years).

Education

Three studies looked at education as a predictor of mental health outcomes among asylum seekers and refugees in Europe (Tinghög et al., 2017; Bogic et al., 2012; Toar et al., 2009). Tinghög et al. (2017) reported similar prevalence rates of PTSD among participants regardless of educational attainment. Years in education ranged from 0 to 9, more than 9 years without a university degree, and more than 12 years with a university degree. Subjective well-being was reportedly lower among those with a lengthier educational background. Overall mental health remained largely unaffected by educational attainment in this sample. However, Bogic et al. (2012) found education to be independently associated with increased instances of mood and anxiety disorders. Asylum seekers were also found to have a lower level of education when compared to refugees (Toar et al., 2009).

Gender

Three studies discussed gender as a predictor of post-migration variables and mental health outcomes (Mölsä et al., 2014; Bogic et al., 2012; Kivling-Bodén & Sundbom, 2002). In a comparative, cross-sectional study (Mölsä et al., 2014) of Somali refugees and their Finnish counterparts, female refugees reported poorer current health and quality of life than

male refugees. Kivling-Bodén and Sundbom (2002) reported a greater diagnosis for PTSD at baseline (T1) for males (73.3%) than females (54.5%). However, there was a non-significant difference between males (60%) and females (63.6%) at T2. A partial least squares regression analysis was carried out to ascertain if there were differences in the relationships between post-traumatic symptom severity at T1, age, and the life-situation at T2 and post-traumatic symptom severity at follow-up.

For females, they found a significant association where 41.7% of the variance between post-traumatic symptom level at T1, age, and life-situation variables at T2 predicted 94.8% of the variance in the posttraumatic symptom level at T2. Whereas for males, the same analysis indicated that 17.7% of the variance in post-traumatic symptom level at T1 explained 66.9% of the variance in the posttraumatic symptom level at T2. Post-migration variables most strongly associated with decreased levels of post-traumatic symptoms purportedly differed according to gender. Kivling-Bodén and Sundbom (2002) reported that social contact, particularly with one's own ethnic group, improved symptoms. For males, however, this sentiment did not hold true. Bogic et al. (2012) reported increased instances of mood disorders, including major depression, dysthymia, hypomania and mania, to be associated with being female.

Pre-migration Trauma as a Predictor of Post-migration Living Difficulties

Three studies described in detail the types and frequency of pre-migration trauma in relation to post-migration mental health outcomes (Steel et al., 2017; Tinghög et al., 2017; Teodorescu et al., 2012b). The types of pre-migration traumatic experiences reported were similar across most studies. However, the rank and degree at which these were experienced across the samples differed. Tinghög et al. (2017) reported war (85%) and exposure to

potentially life-threatening situations (79%) as the most common pre-migration trauma for their sample. Forced separation from friends and/or family (67.9%) and loss of significant other (64%) also ranked highly. They found 63% of the sample had been witnesses to violence or assault, 33% had been victims of violence or assault, 31% experienced torture, while 7% were survivors of sexual assault. In a study of multi-traumatized psychiatric outpatients with a refugee background, Teodorescu et al. (2012b) found severe human suffering was the highest endorsed pre-migration trauma for 89.1% of the sample. Additionally, physical assault occurred in 87.3% of cases, 78.2% were subjected to assault with a weapon. While exposure to war stood at 76.4%. Captivity was the least endorsed, by 56.4% of participants.

Steel et al. (2017) reported the mean number of pre-migration traumatic experiences for their sample to be 9. Frequency of traumatic experiences differed according to gender. Males were found to have experienced more traumatic events (M= 11.00; SD= 8.00). Women, conversely, reported fewer (M = 7.00; SD = 7.00). Material deprivation was ranked highest at 68% of the sample. Sixty-five percent experienced the death or disappearance of family and 60% experienced confinement. While 54% reported being exposed to situations of war, 38% incurred bodily injury and 21% were forced to inflict harm upon others.

Discussion

The aim of this review was to examine and synthesise evidence of post-migration factors affecting mental health outcomes for asylum-seeking and refugee populations across Europe. Twenty-two studies were included in this review.

Length of asylum process and duration of stay was found to be the most frequently cited factor for mental health difficulties in 9 out of 22 studies. This was in line with the

review's hypothesis based on the relevant literature which cites lengthy waiting times for processing applications across Europe. Three studies reported statistically significant associations between residency status and mental health. However, residency status was not independently associated with mental health. Instead, residency status was found to be a marker for other explanatory variables, and this appears consistent in other studies (Silove et al., 1998; Steel et al., 2006).

Family difficulties were also shown to be related to residency and duration of stay (Laban et al 2006; Lamkaddem et al., 2015). This appears to buttress the claim that other post-migration variables are more relevant to mental health outcomes than residency and duration of stay (Silove et al., 1997; Coffey et al., 2010; Tinghög et al., 2017.) Silove et al. (1997) found that family separation, and in particular separation from one's spouse, was significantly associated with anxiety and depression for asylum seekers. Family separation is shown to result in feelings of guilt and powerlessness particularly relating to one's inability to protect their families from difficulties back home (Tinghög et al., 2017).

Talking to friends and developing a broad social network was reported as a very useful support where family were unavailable (Whittaker et al, 2005). With such importance placed on one's social network, it is unsurprising that post-traumatic stress and depressive symptomology were significantly and positively associated with poor social integration and weak social network or support (Teodorescu et al., 2012b; Gorst-Unsworth & Goldenberg, 1998; Schweitzer et al., 2006). However, for some, mistrust in others leads to increasing isolation. A lack of trust in others may partially explain why social integration, particularly outside of one's own ethnic group, was not shown to improve with duration of stay (Schick et al., 2016). Additionally, mistrust of others was shown as a risk factor for declining mental health when related to housing and accommodation issues (Lecerof et al., 2015). Poor social integration and weak social network were also associated with decline of mental health;

housing difficulties and low social participation was reported to be the most significant risk factor for poor mental health (Lecerof et al., 2015). Thus, it appears that lack of social support was a significant predictor of other post-migration difficulties.

Additionally, employment, or the ability to financially support oneself and one's family, was closely related to personal identity and self-worth, it was expected that unemployment would have a negative effect on overall health and quality of life (Teodorescu et al., 2012b). Male asylum seekers were reported to endure more financial related stress than females. This was consistent with findings suggesting that males were more likely than females to be unemployed (Steel et al., 2016). For males, in particular, employment was seen as a significant marker of achievement.

Limitations

Since the search parameters were limited to European host countries alone, there was little discussion by way of non-European practice regarding asylum seekers and refugees. From this point of view, it was difficult to contextualise European law regarding seeking asylum within a global setting. It was especially difficult to accurately account for the role of age on this and other factors considering there was no substantial comparison between older and younger age groups. There appears to be some evidence pointing towards increased acculturative difficulties among older groups, but this finding must be read with caution.

Additionally, the frequent misuse of synonyms purportedly referring to 'asylum seekers' and 'refugees' such as 'immigrants' and 'migrants' made it difficult to ascertain in some studies which populations precisely were being referred to. Some studies were excluded on the basis that it was not immediately clear whether terms such as 'immigrants' or 'migrants' denoted forced or non-forced migrant populations. An overall assessment

regarding the quality of the review was made based on the authors' inability to sufficiently differentiate their subject populations. Given that these are two entirely distinct populations and inclusion of the latter would skew the validity of this review, the reviewers elected to omit these studies. It cannot, therefore, be guaranteed that relevant papers were not overlooked.

Conclusion

Chapter 2 examined several post-migration variables impacting upon mental health outcomes among asylum-seeker and refugee populations. It counters existing findings which suggest that mental health decline among these populations is most significantly associated with residency status and length of asylum procedure/duration of stay. Overall, status is thus shown to be an important marker for other explanatory variables. There is mixed evidence about length of asylum process and duration of stay. Current evidence points towards a significant negative association between these two variables. However, there are conflicting indications claiming that no significant relationship exists. There is sufficient ambiguity in this regard for this association or lack of to be investigated further.

Additionally, it is known that social integration, weak social network, and trust in others appear insidiously problematic across many post-migration variables. This is shown to be especially prevalent among older groups who report increased difficulties with acculturation. There is empirical evidence to suggest that these factors are perhaps more strongly associated with mental health outcomes than any other post-migration variable. Such a finding is useful for devising psychosocial intake risk assessment measures, particularly those focusing on mental health outcomes including PTSD, depression, and anxiety.

Chapter Three: The Experience of Forced Migration

Introduction

The aim of this chapter is to review and describe the experiences associated with the type of forced migration endured by asylum seekers and refugees, predominantly in Europe. To this end, Chapter 3 surveys the existing literature and studies which speak to these experiences. This chapter describes variables related to demographic and migration characteristics of these populations as well as the type and frequency of traumas they are typically exposed to and mental health outcomes for those progressing through the international protection process.

Country of Origin

Forced migration, particularly into Europe, has been one of the most pervasively discussed topics since the height of the 'refugee crisis' in 2015 (Weber, 2019). While the parameters of debate appeared to focus largely on the influx of forced migrants from Syria into Europe, awareness of the growing rates of asylum seekers and refugees from other regions notably declined. Daily reports of Syrian migrants attempting to gain entry to European states appeared to buttress media reports that they accounted for the steadiest increase in numbers of asylum seekers and refugees seeking protection in Europe from 2015 onwards (Weber, 2019).

However, applications for protection from migrants of African origin were shown to increase in the years after the 'refugee crisis', whilst applicants from Syria and Iraq, in reality, continually decreased (Weber, 2019). By the first quarter of 2018, as Weber (2019) reports, 44,000 new applications for protection from African asylum seekers were registered in European member states. This increase in protection applications has been correlated with

an increase in violent conflict in regions such as Zimbabwe and Nigeria; in particular, the ascendancy of Boko Haram within these regions (Weber, 2019).

Research indicates that a vast majority of protection applicants originate from African, Middle Eastern and Asian regions (Schick et al., 2010). According to the Asylum Information Database (AIDA, 2019), this trend is pervasive across Europe. The Asylum Information Database (AIDA) is run by the European Council on Refugees and Exiles (ECRE), containing information on asylum procedures, reception conditions, detention, and content of international protection across 23 European countries. This includes 20 European Union (EU) Member States (Austria, Belgium, Bulgaria, Cyprus, Germany, Spain, France, Greece, Croatia, Hungary, Republic of Ireland, Italy, Malta, Netherlands, Poland, Portugal, Romania, Sweden, Slovenia, United Kingdom) and 3 non-EU countries (Switzerland, Serbia, Turkey).

AIDA's statistics, reported for 2018, showed that in the Republic of Ireland alone there were *n* = 3,673 applications for protection made. Albania accounted for *n* = 459 applicants, Georgia *n* = 450, Syria *n* = 333, Zimbabwe *n* = 282, and Nigeria *n* = 251 (AIDA, 2019). Germany, which the UNHCR identifies as the top-hosting refugee country in Europe, had *n* =185,853 protection applications in 2018 (AIDA, 2019). The foremost 10 countries of origin were predominantly split between Middle Eastern, Asian, and African regions. Syria accounted for *n* = 46,146, Iraq *n* = 18,074, Iran *n* = 11,846, Nigeria *n* = 11,073, Turkey *n* = 10,655, Afghanistan *n* = 12,251, Eritrea *n* = 5,920, Somalia *n* = 5,754, unknown region *n* = 4,849, and Russia *n* = 5,282 (AIDA, 2019).

Bauhoff and Göpffarth (2018) conducted a cross-sectional study of forced migrant morbidity, associated costs and utilization in asylum seekers compared with those who were regularly insured. They found that asylum seekers' healthcare exceeded those of the general

German population. Of the total sample *n* = 3,639 a demographic breakdown indicates the largest proportion of respondents were Asian or Middle Eastern. Syria accounted for *n* = 838 of participants, followed by Afghanistan *n* = 669, Iraq *n* = 527, Albania *n* = 198, Armenia *n* = 194, Iran *n* = 159, Eritrea *n* = 135, Macedonia *n* = 125, Serbia *n* = 121, Kosovo *n* = 94, Russian Federation *n* = 89, and Others *n* = 579.

Italy received less than one third the number (*n* = 53,596) of protection applications submitted in Germany for 2018 (AIDA, 2019). Regions of origin were typically similar as across the rest of Europe. The largest number of applications were from Pakistani nationals (*n* = 7,368), Nigeria accounted for *n* = 6,336, Bangladesh *n* = 5,026, Senegal *n* = 2,867, Ukraine *n* = 2,517, Mali *n* = 2,226, Gambia *n* = 2,101, El Salvador *n* = 1,735, Morocco *n* = 1,734, Côte d'Ivoire *n* = 1,668, Guinea *n* = 1,421, Ghana *n* = 1,171, and Georgia *n* = 1,086. Crepet et al. (2017) conducted a descriptive, cross-sectional study of mental health in trauma in newly landed asylum seekers in Sicily in 2015. They reported similar demographic information among their final sample of *n* = 193 (study began with *n* = 668 participants either retracted or were excluded). Of this sample, the majority of participants were African. Nigerian nationals accounted for 21% of the sample, Gambia 20%, Senegal 17%, Mali 10%, Bangladesh 6%, Other West African countries (Côte d'Ivoire, Guinea Conakry, Guinea Bissau, Liberia, & Ghana) 16%, Others (Pakistan, Eritrea, Somalia, Egypt, Afghanistan, Morocco, & Libya) 11%, and Unknown 1% (Crepet et al., 2017).

Similarly, applicants seeking protection in the United Kingdom in 2018 were from comparable countries of origin. 10 of the 11 main countries recorded on the AIDA (2019) database were Asian and African regions including, Iran, Iraq, Pakistan, Eritrea, Afghanistan, Sudan, India, Bangladesh, Vietnam, Syria. Applications for protection made in France during this period were also predominantly relating to African, Middle Eastern and Asian countries. A total of *n* = 119,190 applications were made, of these applications, the highest number (*n* =

10,270) were submitted by Afghanistan nationals. Albanian applicants accounted for *n* = 9,690, Georgia *n* = 6,960, Guinea *n* = 6,880, Côte d'Ivoire *n* = 5,375, Bangladesh *n* = 4,820, Sudan *n* = 4,360, Democratic Republic of Congo *n* = 4,230, Mali *n* = 3,170, China *n* = 2,710, Syria *n* = 2,930, Iraq *n* = 2,100, and Eritrea *n* = 1,720 (AIDA, 2019).

According to AIDA (2019), Sweden did not differ significantly from the European norm in terms of the distribution of protection applicants according to country of origin. In 2018, the Swedish government received a total of *n* = 21,502 applications for protection. The largest number of applicants came from Syria *n* = 2,709, Iraq *n* = 1,369, Iran *n* = 1257, Georgia *n* = 1,156, Eritrea *n* = 873, Afghanistan *n* = 805, stateless persons *n* = 765, Uzbekistan *n* = 765, Somalia *n* = 735, and Albania *n* = 616 (AIDA, 2019). In their study of mental health and quality of life among asylum seekers and refugees living in refugee housing facilities in Sweden, Leiler et al. (2019) recruited a sample of *n* = 510 forced migrants, of which Afghanistan nationals accounted for the highest proportion, *n* = 196. Syria accounted for *n* = 137, Iraq *n* = 51, Iran *n* = 22, Eritrea *n* = 21, Somalia *n* = 11. Cumulatively, Palestine, Ethiopia, Pakistan, Algeria, Morocco, Nigeria, Egypt, Kuwait, Lebanon, Sudan and Yemen accounted for the remaining participants *n* = 72.

Additionally, evidence suggests that beyond Europe, African, Asian, and Middle Eastern countries remain the foremost regions of exile and account for the highest proportion of protection applications worldwide (Drožđek & Bolwerk, 2010; Hodges-Wu & Zajicek-Farber, 2017). In a cross-sectional study of *n* = 31 torture survivors in the United States of America, Hodges-Wu and Zajicek-Farber (2017) identified the Democratic Republic of Congo as the number one (55%) country of origin for protection applicants, followed by Guatemala (13%), Haiti (11%), Eritrea (6%), Syria (6%), Sierra Leone (3%), Colombia (3%), and Nigeria (3%).

Cooper et al. (2019) conducted a large longitudinal cohort study with *n* = 2,399 humanitarian migrants (refugees) residing in Australia over a 5-year period. The aim was to identify determinants of mental illness among resettled humanitarian migrants from the first three waves of this cohort study. Demographics at baseline (W1) were similar to the migration data did not deviate from the data reported in other studies. Middle Eastern refugees accounted for 52.9% (*n* = 1,270) of the sample at W1, Central Asia 25.5% (*n* = 611), Southern Asia 9.1% (*n* = 218), Africa 6.5% (*n* = 157), and South-East Asia 5.7% (*n* = 137) (Cooper et al., 2019).

Gender

According to AIDA (2019), males accounted for the highest percentage of protection applicants across EU member states in 2018. AIDA's records for this year report that in the Republic of Ireland alone 51.8% of total applications (*n* = 3,673) for protection in the Republic of Ireland were submitted by adult males. Additionally, adult females accounted for 24.9% of applicants and children accounted for the remaining 22.8%.

AIDA (2019) reports a comparable statistic in relation to German protection applications and gender. Out of the applications received in 2018 (*n* = 185,853), 56.7% were male, while 43.3% were female. Interestingly, Schock et al. (2015) report an almost identical statistic in their study on the impact of asylum interviews on the mental health of traumatized asylum seekers in Germany. In the asylum-seeking group[1] males accounted for 43% and females 57%.

Similarly in Italy, adult male applicants stood at 78.9% (of total applicants *n* = 53,700), adult females at 21.1%, children at 7.1%, and unaccompanied minors at 6.8%

[1] As distinct from the comparison group.

(AIDA, 2019). Additionally, of the *n = 193* participants in Crepet et al's., (2017) study mentioned above, adult males accounted for 92% of those diagnosed with mental health conditions. By comparison, adult females accounted for a minimal 8% of the sample. Furthermore, this trend continued across other EU countries (AIDA, 2019). In Sweden, for example, the total number of protection applicants for 2018 was *n* = 21,502. 60.1% were adult males, 39.9% were adult females, 29.4% were children, while unaccompanied minors accounted for 4.4% (AIDA, 2019). Swedish research conducted by Leiler et al. (2019) buttressed this finding having reported a significant percentage (72%) of their sample *n* = 510 to be adult male. While, conversely, only 26.6% of participants identified as adult females.

Similarly, the total number of protection applications (*n* = 119,190) in France during 2018 was dominated by adult male applicants (65.3%) (AIDA, 2019). Comparatively, adult female applicants stood at just slightly over half (34.7%) the rate of their adult male counterparts. Additionally, children accounted for the remaining 19.5%.

This is a trend continually noted in academic research: Diaz et al. (2015) reported similar findings in their study of multimorbidity among registered immigrants in Norway. Adult female participants accounted for the lowest proportion (40.5%) of the refugees sampled in the study (*n* = 67,398). This study did not include a sample of asylum seekers but did account for those seeking family reunification. Conversely, adult females accounted for the highest proportion (70.1%) of a total *n* = 101,276 reunified with family members who obtained permanent residency (Diaz, 2015). Stenmark et al. (2014) reported comparable statistics in their study gender and offender status predicting treatment success in refugees and asylum seekers with PTSD. They conducted a study of those who responded and did not respond to treatment for PTSD focusing significantly on participants who tended toward violent behaviour. Out of the total sample (*n* = 54) Stenmark et al. (2014) found that while

males accounted for the highest percentage of participants (67%) it was females (33%) who benefited more from PTSD treatment.

Similarly, in a sample of *n* = 104 traumatised refugees measuring the relationship of social integration and psychological impairments Schick et al. (2016) conducted a cross-sectional study reporting similar demographics in relation to gender distribution, where males accounted for most (78.8%) of the sample. Additionally, Droždek and Bolwerk (2010) conducted a longitudinal study examining the efficacy of group therapy for traumatised asylum seekers and refugees. They reported an exceedingly high proportion (89%) of adult male participants in their study. Only 10 adult female participants took part in the six-year study.

Leiler et al. (2019) reported a comparable statistic in terms of gender breakdown among their study sample of *n* = 510 asylum seekers and refugees resident in Sweden. They studied the quality of life and mental health among this sample and reported that males accounted for a significant proportion 72% (*n* = 367) of the overall sample. In a study investigating mental health and trauma in asylum seekers landing in Sicily in 2015, Crepet et al. (2017) reported comparable statistics in terms of gender breakdown. Of those diagnosed with mental health conditions from their sample (*n* = 193), 92% were male. Notably, of the literature surveyed, only one study (Alpak et al., 2015), which examined PTSD among Syrian refugees in Turkey, reported an almost equal number of males (50.9%) and females (49.1%) in its sample.

Very few of the studies surveyed challenged this pattern of gender distribution across samples. Only one study (Nickerson et al., 2014), conducted outside of Europe, reported a higher rate of females than males. However, there was minimal difference between the two genders (males = 48%, female = 52%).

Relationship Status

Relationship status did not vary significantly across studies (Diaz et al., 2015; Schick et al., 2016). The two highest endorsed relationship items were being 'married' or 'single'[2]. 50.3% of all refugee participants (*n* = 67,398) in a study of multimorbidity among immigrants in Norway, conducted by Diaz et al. (2015), reported being currently married. 36% reported never having been married. 13.7% were divorced, widowed, or 'other' combined (Diaz et al., 2015). Schick et al. (2016) reported 65.5% of the total sample *n* = 104 to be married or in a relationship. 24% of the sample were single, and similarly to Diaz et al. (2015), 13.5% were divorced or widowed (Schick et al., 2016). Married participants accounted for the largest proportion (86.4%) of the total sample (*n* = 352) according to Alpak et al. (2015). In their study of PTSD among Syrian refugees in Turkey, Alpak et al. (2015) found a significant difference between the number of married participants and those who identified as single. Single participants only accounted for 13.1% of the sample. In line with other studies surveyed, however, 0.5% identified as divorced or widowed.

Accommodation

Accommodation provisions for asylum seekers is similar across EU states, but the significant influx of protection applications has exceeded, in many countries, the respective government's capacity to accommodate individuals in appropriate residences. Consequently, many are also living in informal settlements, hotel rooms, other lodgings, and are effectively homeless (Busetta et al., 2019). Asylum intake centres and accommodation centres that were originally devised to house applicants temporarily have, in many instances, been transformed into longer-term residences owing to lack of transfer facilities. Applicants living in asylum seeker/refugee accommodation (equivalent to Direct Provision) have been shown to exhibit

[2] Including the item 'having never been married', Diaz at al. 2015.

high levels of psychological distress and self-report their quality of life as low in comparison to the general population (Leiler et al., 2019).

In Germany, for instance, three types of accommodation are available to asylum seekers: receptions centres, collective accommodation centres, and decentralised accommodation (AIDA, 2019). New arrivals are typically expected to remain in reception centres for up to 6 months after their applications for protection have been submitted. Following from this, asylum seekers are transferred to collective accommodation centres which are shared dwellings with other protection applicants. However, where need for accommodation exceeds availability of collective accommodation, applicants may be housed elsewhere and, in some instances, will reside in apartments, flats, and other decentralised dwellings (AIDA, 2019; see also, Busetta et al., 2019).

The United Kingdom follows the same general protocol upon intake of newly arrived asylum seekers. Those seeking protection are taken to initial accommodation which are reception centres designed to host asylum seekers for no more than the first 19 days after arrival into the United Kingdom (AIDA, 2019). Protection applicants can choose to stay with family members or friends and claim cash support as an alternative to government provision. For those who remain in government provided accommodation, they are redirected to dispersed accommodation run under contract by the Home Office (AIDA, 2019). Dispersed accommodation are self-contained lodgings, apartments, flats, hostels. Applicants do not get individual accommodation and typically share with other asylum seekers. (AIDA, 2019).

In the Republic of Ireland, similarly, new arrivals are taken into reception centres which offer temporary accommodation while applicants are processed and then transferred into direct provision accommodation. DP centres are intended to house protection applicants until such time as a decision is made regarding their application for protection. These are

typically communal dwellings with shared living quarters. Recently, with an increase in the number of protection applicants resident in the state, decentralised accommodation has become common in the Republic of Ireland as with Germany. Asylum seekers are often housed in hotels, bed and breakfasts, and other lodgings.

Additionally, for those granted protection, the task of finding accommodation does not improve with certainty of status, and some will become homeless. First reception centres in Italy serve a similar intake function to reception centres in Germany, the Republic of Ireland, and the United Kingdom. These centres are intended for short-term stays upon arrival into Italy. In cases where there are no vacancies in the first reception centres, asylum seekers are redirected to temporary facilities (AIDA, 2019). Such facilities were originally intended for emergency use, where there were high numbers of new arrivals. In recent times, however, their usage has become more frequent since intake regularly exceeds the capacity of the first reception centres (AIDA, 2019). Additionally, non-governmental organisations, religious bodies, and private citizens have opened up their own personal accommodation to both asylum seekers and refugees in Italy. These types of reception are informal and exempt from government funding of any sort and have been met with resistance by government representatives (AIDA, 2019).

Direct and Indirect Trauma Exposure

Asylum seekers and refugees tend to exhibit higher rates of PTSD and other psychological disorders in comparison with the general population (Li et al., 2016; Nickerson et al., 2014). This is linked to both direct and indirect trauma exposure. Potentially traumatic events (PTEs) are manifold in the context of forced migration. Out of the participants diagnosed with mental health disorders (n = 193), Crepet et al. (2017) reported a total of 272

types of PTEs experienced during the pre-migration phase and 434 experienced peri-migration. 60% of asylum seekers were reported to experience pre-migratory PTEs. 89% experienced peri-migration PTEs. Additionally, most experienced more than one PTE at a time.

The most frequently endorsed pre-migratory (*n* = 64) and peri-migratory (*n*=127) PTEs were direct experience of a combat situation or risk of death (Crepet et al., 2017). The highest endorsed indirect trauma experienced both pre-migration (*n* = 42) and peri-migration (*n* = 59) were witnessing violence or death. The second most common indirect trauma experienced during both phases was having a relative killed, missing or incarcerated. This was more common during the pre-migration phase (*n* = 42) than the peri-migration phase (*n* = 14). Interestingly, intra-family conflict was more frequently reported (*n* = 41) than physical or psychological violence (*n* = 20) as a directly experienced traumatic event (Crepet et al., 2017). The latter was more commonly experienced (*n* = 44) peri-migration, while the former was not reported at all peri-migration. Rape or sexual assault was not endorsed as a pre-migratory trauma, it was, however, reported by *n* = 10 individuals peri-migration.[3] Torture was reportedly experienced most often during the peri-migration phase (*n* = 47) and was significantly less so in the pre-migration context (*n* = 4).

Alpak et al. (2015) conducted a mixed-method, cross-sectional study of PTSD among Syrian refugees in Turkey (*n* = 352). Using a modified form of the stressful life events screening questionnaire devised by Stamm (1996), Alpak et al. (2015) reported the rates of trauma experienced by those both above and below the threshold for PTSD diagnosis. It is unclear whether each PTE occurred pre-, peri-, or post-migration. Exposure to war was the most frequently endorsed trauma among participants (*n* = 324). Experiencing or witnessing

[3] Research indicates that rape and sexual assault are more commonly experienced by females. The low rate of endorsement for this item may be explained by the number of female participants (*n*= 15) in the total sample (*n*=193).

death of a close friend or a family member (except spouse or child) was the second highest endorsed item (*n* = 233). By comparison, *n* = 33 participants recalled experiencing or witnessing the death of a spouse or child.

Additionally, seeing and having contact with bodies post-mortem, apart from funeral rites, was endorsed by *n* = 178 participants. Experiencing or witnessing the abduction or hostage of a close friend or a family member was reported by *n* = 169 participants. This was above the number of participants (*n* = 148) who spoke of experiencing or witnessing a close friend's or family member's torture. By comparison only *n* = 34 participants reported being tortured or beaten themselves. More generally, witnessing torture or beating was reported by *n* = 112 of those sampled. The same number of participants (*n* = 1) reported both experiencing and witnessing sexual violence. *n* = 25 experienced or witnessed a serious accident or injury, while *n* = 16 individuals felt responsible for someone else's injury or death. The single item not endorsed by any of the sample was experiencing or witnessing the exposure of a close friend or a family member to radiation or chemical weapons (Alpak et al., 2015).

Nickerson et al. (2014) conducted a study on PTSD and prolonged grief in refugees exposed to trauma and loss in Australia concluding with similar findings to Crepet et al. (2017) and Alpak et al. (2015). Nickerson et al. (2014) reported the mean for overall trauma exposure in a sample of *n* = 248 adult refugees as *M* = 4.01 (*SD* = 3.32). It is unclear whether this rate pertains to pre- and peri-migratory traumatic experience. The highest endorsed item was being close to death (*n* = 146). This was similarly reported by Crepet et al. (2017) noted above. Unnatural death of family or friends and lack of food or water during conflict were both endorsed at the same rate (*n* = 120). Ill health without access to medical care was reported by *n* = 78 participants. This item was not observed by Crepet et al. (2017) or Alpak et al. (2015). Lack of shelter during exposure to conflict (*n* = 76), murder of a stranger or

strangers (*n* = 70), and imprisonment (*n* = 53) followed (Nickerson et al., 2014). Exposure to war-related combat situations was reported by *n* = 48 participants. This differed significantly from Crepet et al. (2017) who reported exposure to combat as the highest endorsed PTE and Alpak et al. (2015) who identified exposure to war as the most frequently endorsed trauma related item.

Forced separation from family members was experienced by *n* = 40 participants. Serious injury was reported in *n* = 30 cases, similar to the rate of endorsement reported by Crepet et al. (2017). Being lost or kidnapped was recalled in *n* = 29 instances, while exposure to or experience of torture was reported by a lower number of participants *n* = 24. The two least endorsed items were brainwashing (*n* = 11) and rape or sexual assault (*n* = 7) (Nickerson et al., 2014).

Rates of PTSD and C-PTSD following Traumatic Exposure

Extant literature suggests that PTSD is the most prevalent mental health illness among asylum-seeking and refugee populations, followed by depression and anxiety, (Georgiadou, 2017; Crepet et al., 2016; Alpak et al., 2015). In 2017, Georgiadou et al. conducted a study examining high manifestations of mental distress in Arabic speaking asylum seekers accommodated in collective centers in Germany (*n* = 56). They found that 35.7% (*n* = 20) of participants were symptomatic of PTSD. In a sample of 198 asylum seekers diagnosed with mental health disorders, Crepet et al. (2017) reported that PTSD (31%) was the highest endorsed main diagnosis for mental ill-health, followed closely by depression (20%). Additionally, anxiety disorders (11%) were the fourth most prevalent disorders.

Schock et al. (2015) found significant differences in the PTSD subscales between baseline (T1) and post-interview (T2). Intrusion symptoms significantly increased from *M* =

10.72 (*SD* = 2.32) before interview to *M* = 13.52 (*SD* = 1.78) post-interview. However, avoidance subscales decreased from *M* = 13.46 (*SD* = 3.76) to *M* = 12.10 (*SD* = 3.18). Similarly, hyperarousal symptoms decreased from *M* = 10.97 (*SD* = 2.81) pre-interview to *M* = 9.35 (*SD* = 2.51) 16 days after interview.

Of the three most prevalent mental health disorders experienced by asylum seekers and refugees, PTSD consistently emerges as the most widespread. Alpak et al. (2015) found, in a sample of *n* = 352 refugees, that the frequency rate of PTSD was 33.5% (*n* = 118). Face-to-face interviews were conducted by trained psychiatrists for diagnostic purposes. Participants were assessed according to DSM-IV-TR criteria. Of those who met the threshold for PTSD diagnosis, *n* = 11 (9.3%) were diagnosed with acute PTSD, *n* = 105 (89%) had chronic PTSD, and *n* = 2 (1.7%) had late-onset PTSD (Alpak et al., 2015). 54.8% (*n* = 193) of the sample did not meet the criteria for diagnosis. While 11.7% (*n* = 41) experienced spontaneous remission. These individuals were reported to have met the criteria for diagnosis previously but at the time of assessment did not meet this threshold.

Additionally, Alpak et al. (2015) reported that the average number of traumatic events for those diagnosed with PTSD was 4.12 ±1.78 (min – max: 1 – 9). For participants who did not meet the DSM-IV-TR criteria, the mean number of traumatic events was 3.40 ± 2.13 (min – max: 0 – 8). In the case of spontaneous remission, the mean number of traumas was 3.90 ± 1.42 (min – max: 1 – 6). Furthermore, when these three categories of participants were compared in relation to their average number of traumas, the difference reported was statistically significant.

Elsewhere, Cleveland et al. (2018) found that asylum seekers who experienced detainment by immigration officials were at higher risk of developing clinically significant rates of PTSD. In their study of symbolic violence and disempowerment as factors in the

adverse impact of immigration detention on adult asylum seekers' mental health, Cleveland et al. (2018) surveyed (n = 81) asylum seekers who were detained by immigration official in Canada. They compared their findings to those who had not experienced incarceration and reported that, after an average of 18 days detention, detained participants were twice as likely to reach the threshold for diagnosis in comparison to those who were not incarcerated.

Research relating to Complex PTSD (C-PTSD) in asylum-seeking and refugee populations is relatively limited in comparison to the numerous accounts of PTSD, depression, and anxiety, typified above. It is apparent, however, from existing literature that C-PTSD symptomology is prevalent within these populations (Nickerson et al., 2016; Kissane et al., 2014; Cloitre et al., 2009). However, research suggests that the prevalence rates for diagnosis of C-PTSD are historically much less than that of PTSD (Teegen & Vogt, 2002; De Jong et al., 2005; Teodorescu et al., 2012; Palic & Elklit, 2014).

Teegen and Vogt (2002) conducted a study of n = 33 treatment-seeking refugees in Germany and found that prevalence rates of PTSD were higher than that of C-PTSD. 66.7% (n = 22) met the threshold for C-PTSD determined by a Structured Interview for Disorders of Extreme Stress – Self Report (SIDES-SR) and 93.9% (n = 31) exhibited symptoms consistent with PTSD according to the PTSD Checklist – Civilian Version (PCL-C). Additionally, using the same C-PTSD measure (SIDES-SR) Palic and Elklit (2014) reported a lower rate of symptom endorsement in a sample of n = 116 treatment-seeking Bosnian refugees in Denmark. 33.6% (n = 39) of their sample showed symptoms consistent with full C-PTSD diagnosis.[4]

De Jong et al. (2005) found a significant difference in the number of participants experiencing PTSD consistent symptoms compared to C-PTSD. Out of a sample of n = 1200 Eritrean refugees living in Ethiopia, the prevalence rate of PTSD was 15.8% (n = 190),

[4] Rates of endorsement for PTSD are not supplied.

significantly higher than the proportion of participants who met the threshold for C-PTSD (2.2%, *n* = 26). Teodorescu et al. (2012) reported similar findings among *n* = 61 treatment-seeking refugees hosted in Norway. The diagnostic instrument used for assessing C-PTSD was a Structured Interview for Disorders of Extreme Stress administered by trained clinicians. They found the C-PTSD prevalence rate to be 16.4% (*n* = 10) compared with 82% (*n* = 50) for PTSD diagnosed using a Structured Clinical Interview for DSM-IV Axis 1 Disorders (SCID-1).

Depression and Anxiety

Moderate to severe depression was reported by Georgiadou et al. (2017) in 35.7% (*n* = 20) of their sample, while severe depression was reported in 23.2% (*n* = 13). Additionally, 26.8% (*n* = 15) displayed symptoms of severe anxiety. 64.3% (*n* = 36) of participants had at least one mental health disorder. 17.9% (*n* = 10) were found to have PTSD, depression, or anxiety). While 25% (*n* = 14) of the sample had a combination of any two mental health disorders (PTSD and depression, PTSD and anxiety, or depression and anxiety). 21.4% (*n* = 20) met the criteria for diagnosis of all three disorders. Of the 56 asylum seekers sampled 35.7% did not meet the threshold for PTSD, depression, or anxiety.

Schock et al. (2015) found that depressive symptomology, in particular, differed over time from pre- to post-interview for residency. Asylum seekers were assessed ten days prior to and sixteen days after their substantive interview with significant changes observed. Anxiety symptoms did not show any significant change from baseline (*M* = 2.81, *SD* = 0.47) to follow-up (*M* = 2.69, *SD* = 0.77) (Schock et al., 2015). However, asylum seekers exhibited a significant decrease in depressive symptoms from baseline to follow-up. Mean symptom rate at T1 was 3.00 (*SD* = 0.55) and decreased to 2.60 (*SD* = 0.77) at T2.

Research by Poole et al. (2018) has also suggested that rates of depression are highly correlated with conflict situations, pre-migration. In 2018 they conducted a cross-sectional survey of *n* = 135 Syrian asylum seekers and found that prevalence for Major Depressive Disorder (MDD) was nearly ten times higher in this sample than in pre-conflict Syrians and the general population. MDD was screened using the Patient Health Questionnaire – 8 (PHQ – 8). 44% (95 CI: 37 – 50) of the sample were symptomatic of MDD. Additionally, being female, having children, and a protracted asylum process were shown to be significant risk factors for MDD. Furthermore, their research indicates rates of MDD nine times higher than the prevalence rates reported previously by Fazel et al. (2005).

In their study of trauma exposure and refugee status as predictors of mental health outcomes in treatment-seeking refugees, Knipscheer et al. (2015) found that 95% of *n* = 688 participants reached the threshold for clinical diagnosis of depression according to the Hopkins Symptom Checklist 25 (HSCL-25). Mean symptom severity was 2.9 (*SD* = 0.5). Residency status was significantly associated with an increase in depressive symptoms. Hierarchical regression analysis showed that refugee status accounted for 2% of the variance in symptom severity. However, traumatic exposure such as human rights abuse, lack of necessities, traumatic loss, and separation from others were not singularly associated with variation in symptom severity.

Somatisation

Looking at the association of post-traumatic and pos-tmigration stress with pain and other somatic symptoms reported by asylum seekers and refugees, Morina et al. (2018) reported two different factors of somatic complaints according to an exploratory factor analysis of *n* = 134 forced migrants. Somatic indicators were measured using the

somatisation subscale of the Symptom Checklist (SCL-90), while the Posttraumatic Diagnostic Scale in conjunction with DSM-V criteria were used to measure PTSD symptomology. Morina et al. (2018) found that the twelve items of the SCL subscale[5] could be classified according to two distinct factors relative to distinct clusters of PTSD symptomology as describe by DSM-V. Factor 1 encompassed symptoms related to bodily dysfunction 'weakness' and factor 2 related to increased sympathetic activity 'arousal' (Morina et al., 2018). Only alterations in cognitions and mood (DSM-V criteria D) and alterations in arousal and reactivity (DSM-V criteria E) were independently associated with factor 1, 'weakness'. While alterations in arousal and reactivity (DSM-V criteria E) and post-migration living difficulties were related to factor 2, 'arousal' (Morina et al., 2018).

Bentley et al. (2011) studied a sample of n = 74 Somalian refugees resident in the United States of America and examined the association between mental health outcomes and somatisation. They found that somatic complaints had a statistically significant indirect effect on the relationship between pre-migration trauma and depression and anxiety. Somatic complaints accounted for 9% of the variance in depression and 14% of the variance in anxiety. However, in this particular sample somatisation did not have a similar effect on the relationship between pre-migration trauma and PTSD. Overall, 18.9% of participants reported somatic complaints.

Conversely, Spiller et al. (2016) conducted a cross-sectional study of n = 134 severely traumatised refugees and asylum seekers attending psychiatric clinics in Switzerland. Using the SCL-90 subscale to measure somatic symptoms, they found that somatisation was significantly positively associated with PTSD symptom severity. Regression analysis showed that somatisation was one of the most significant predictors of PTSD (β=0.47).

[5] (1) Soreness of muscles, (2) Numbness or tingling in part of the body, (3) Pains in lower back, (4) Heavy feeling in your arms or legs, (5) Feeling weak in parts of your body, (6) Trouble getting your breath, (7) Pains in heart or chest, (8) Faintness or dizziness, (9) Headaches (10) Nausea or upset stomach, (11) Lump in your throat, (12) Hot or cold spells.

Junod Perron and Hudleson (2006) interviewed *n* = 26 asylum seekers and refugees from former Yugoslavia who were attending an outpatient clinic in a Swiss hospital. Participants reported a perceived correlation between current illnesses, pre-migration trauma, post-migration living difficulties and somatisation. The most prevalent somatic indicators included headaches (77%), bone and joint pains (65%), fatigue (46%), and sleep disturbances (27%).

In 2010, Schweitzer et al. surveyed a sample of *n* = 70 Burmese refugees residing in Australia, using HSCL-37 checklist subscale they investigated the somatic indicators amongst this group. Their study found somatisation to be largely related to post-migration living difficulties above pre-migration traumatic exposure. Van Ommeren et al. (2002) conducted a study of somatisation in (*n* = 1,052) Bhutanese refugees resettled in Nepal. Their sample was divided evenly into two groups; group one consisted of *n* = 526 refugees who were victims of pre-migration torture and group two consisted of *n* = 526 who were not.

The interview schedule contained a checklist including 25 somatic complaints relating to nervous, musculoskeletal, gastrointestinal, genitourinary, cardiovascular, and respiratory system symptoms, and weakness. Somatic complaints were more prevalent amongst those who had suffered torture compared with those who had not been tortured. *N* = 82 survivors (16%) reported no somatic complaints, *n* = 375 survivors (71%) reported between 1 and 4 somatic complaints, *n* = 69 (13%) reported 5 or more somatic complaints. Hierarchical regression showed that sex, age, torture, and PTSD symptoms were predictors of the frequency and type of somatic complaints (Van Ommeren et al., 2002).

Discussion

This chapter reviewed and described the experience of asylum seekers and refugees, predominantly in European nations. Despite the intense media focus on the 'refugee crisis' and it relationship with Syria, applications for protection from migrants of African origin were shown to increase in the years after the 'refugee crisis' and applicants from Syria and Iraq in reality continually decreased. This is perhaps surprising in the wake of the influx of refugees from Syria, but it has always been a well-established fact in the literature that most individuals seeking asylum tend to originate from African countries where war, torture, civil and governmental unrest are rife.

This trend is replicated in the descriptive data presented in the Chapter 6 of this thesis. With regard to demographic data, the findings tend to fit in line with wider European trends. This is true also in terms of the male to female ratio of protection applicants. In European nations it is shown that males account for the highest proportion of protection applicants, which the findings support. Additionally, across the cited literature, and within the study's findings, asylum seekers and refugees tend to be either married or single. This trend, which will be explained later, has important implications in relation to social integration and mental health outcomes for the study population.

The literature has shown that regardless of the European state of residence or the country in which an application for International Protection has been made, there is little difference in the treatment of protection applicants due to the adoption of a single procedure across European countries. With growing numbers of asylum applicants presenting each year, a greater appreciation for the diverseness of individuals' trauma history and exposure types as well as mental health difficulties and accompanying somatoform disorders must be understood. To this end, these points will be discussed in greater detail in the Chapter 6.

Conclusion

In conclusion, although there is no single profile that adequately describes all asylum seekers and refugees, Chapters 2 and 3 have provided evidence about the general experiences, social context, and psychological statuses of this particular populations. In general, it can be said that married males account for the highest proportion of asylum seekers and refugees globally. Additionally, the largest numbers of protection applicants originate from Asian and African countries, with war-affected regions accounting for a significant proportion of males and females in exile. The literature surveyed showed that specific types of direct and indirect trauma were consistent across each of the samples, varying only in terms of rank and severity. PTSD was reported as the most significant mental health disorder among asylum-seeking and refugees populations.

Furthermore, PTSD was correlated with somatisation in both populations more so than any other mental health ailment. Depression and, to a lesser extent, anxiety were the second and third most pervasive mental health disorders across the majority of the literature cited. However, C-PTSD appeared to be underreported in the studies surveyed. The available literature on PTSD, depressive disorders, and anxiety far exceeded those available on C-PTSD in the context of forced migrant groups. This was expected given that reporting on C-PTSD amongst these populations has been historically scant.

Chapter Four: Spiritan Asylum Services Initiative Care Centre for Survivors of Torture

Introduction

The practical component of this study was completed in collaboration with the care centre for survivors of torture in the Republic of Ireland, Spirasi. Spirasi's services are offered to individuals who have experienced forced migration, particularly those who have suffered trauma and survivors of torture. This chapter describes, in detail, the story and structure of the organisation in relation to this study. Chapter 4 discusses the key workers involved in the assessment and rehabilitation procedures as well as the pathways of referral into the service, the key assessments and services offered by the organisation.

History of the Organisation

Spirasi, or Spiritan Asylum Services Initiative, was founded in 1999 by the Spiritan congregation and continues under the trusteeship of the Irish Spiritan Province to this day. It is a non-governmental organisation based in North Dublin and supports asylum seekers, refugees, and other disadvantaged migrant groups across the Republic of Ireland. Currently, Spirasi's services are open to both adults and minors from these populations. This is a relatively new service open to minors, as the organisation worked solely with those over eighteen years of age prior to 2017. Spirasi offers a unique service to clients as it is the only centre in the Republic of Ireland for the care of survivors of torture. It has been a member of the International Rehabilitation Council for Torture Victims (IRCT) since May 2003. Spirasi's partners and funders comprise of the City of Dublin Education and Training Board, Tusla (Irish Child and Family Agency), United Nations Voluntary Fund for Victims of Torture, Health Service Executive, European Commission under the Asylum, Migration and

Integration Fund 2014-2020; it is also supported by the Department of Justice and Equality, World Mercy Fund and The Irish Spiritan Province.

Rehabilitation Key Workers

Rehabilitation Co-ordinator

The rehabilitation co-ordinator has overall responsibility for the IA and MLR procedures in Spirasi. They work closely with the rehabilitation administrators for timetabling appointments and managing the physicians' calendar, as well as consulting on remit panel deliberations. The co-ordinator has particular responsibility for management of the medical doctors working in the organisation. This includes overseeing the completion of IAs and MLRs, as well as ensuring all documentation are completed and forwarded as necessary for each assessment.

Rehabilitation Administrators

The rehabilitation administrators liaise with each sector in Spirasi. They are responsible for receiving and managing referrals; recording the decisions of the remit panel; managing waiting lists for IA and MLR appointments; allocating appointments; managing client files as well as general secretarial duties. They are responsible for managing physician and psychosocial timetables for IAs and MLRs. The rehabilitation administrators work primarily with the rehabilitation co-ordinator and CEO.

Examining Physicians

Medical doctors have two particular functions in Spirasi; to conduct Initial Assessments and Medico-legal reports. They do not offer medical services to clients outside of this remit. Spirasi employs 6 medical doctors at present, these are 4 female and 2 male physicians who are trained in working with trauma and torture survivors. Its medical staff are both current and retired GPs, specialists and Safetynet (medical charity based in Dublin) physicians. In most instances, as with interpreters, unless otherwise specified, clients are matched with medical doctors of the same sex. It is not uncommon for male clients to request a female physician. Typically, this occurs when they have experienced sexual assault.

Therapy Co-ordinator

The psychotherapy service is the largest clinical component of Spirasi. The co-ordinator is responsible for the management and oversight of this service. All referrals for psychotherapy are sent to the co-ordinator who, in turn, allocates clients to each of the therapists. The therapy co-ordinator is also responsible for liaising with external services on behalf of clients, as well as organising training opportunities for the psychotherapy team.

Psychotherapists

There are three different therapy domains in Spirasi at present: individual, family and group. Individual therapy is by far the most common psychotherapeutic intervention offered by the organisation. Each member of the therapy team specialises in one-to-one therapy, and some offer group as well as family therapy. They are also responsible for tending to the psychosocial needs of their clients. In total, there are 12 psychotherapists working on-site at Spirasi. This includes 2 family psychotherapists and 8 individual psychotherapists, 2 of

whom also facilitate group psychotherapy sessions. The psychotherapy team is also responsible for running the psycho-education component of the Induction Groups following IA.

Psychosocial and Education Co-ordinator

The psychosocial co-ordinator manages both the psychosocial and education services in Spirasi. While the psychosocial service is run in Spirasi's main office, the education service is run at the Lantern Centre in Dublin City Centre. The co-ordinator is responsible for the psychosocial team, psychosocial components of all assessments, in addition to the day to day management of the education service in the Lantern Centre. All referrals for education courses are reviewed by the co-ordinator and clients are matched to classes based on their education needs and abilities. Current classes on offer by Spirasi are English for complete beginners, mixed levels, as well as QQI English levels 3, 4 and 5; numeracy; computers, knitting, and guitar.

Psychosocial Officers

Psychosocial officers are responsible for co-ordinating IAs, providing support to medical doctors for MLRs, assisting and advising clients regarding psychosocial issues, including housing, medical, financial, education, and legal difficulties. Officers assist clients in liaising with internal services and external organisations, such as the Reception and Integration Agency, International Protection Office, Health Service Executive, Department of Justice, Department of Social Protection, and the Refugee Legal Service. There are currently 4 psychosocial officers working in the organisation; this team is also responsible for delivering the psychosocial component of the Induction Groups.

Befriending Officer

At present, Spirasi employs 1 befriending officer and a number of volunteer befrienders throughout the Republic of Ireland. The befriending project is open to clients who are particularly isolated and would benefit from organised companionship and support. The befriending officer co-ordinates the entire project, recruiting volunteer befrienders across the country and matching them with clients in their vicinity. Clients are internally referred to the befriending project by Spirasi's rehabilitation and education services. Frequently, clients are referred to this service due to issues of loneliness and isolation affecting mental health. The befriending officer is responsible for identifying befrienders best matched to the individual client and facilitates an initial meeting. Client and befriender are encouraged to link in with each other independently.

Befrienders

Spirasi's befrienders are located all throughout the Republic of Ireland. All befrienders work on a voluntary basis and are responsible to the befriending officer. They offer organised companionship to clients who are particularly isolated and would benefit from additional social contact and networks. Befrienders are required to attend ongoing training and supervision events with the befriending officer. They typically meet with clients on a weekly basis.

Interpreters

Spirasi works with several interpreting companies in the Republic of Ireland. It typically uses the services of two particular companies based in Dublin. From the point of referral, clients are offered the opportunity to request an interpreter and indicate their

preferred gender. As a matter of course, Spirasi will match clients with same-sex interpreters unless otherwise specified by the client. In certain cases, clients may also request interpreters from specified regions, as there are often cultural, religious or tribal divides which must be considered. Interpreters should not be previously known to clients or family members in order to maintain professional boundaries and confidentiality. Interaction between clients and interpreters is discouraged outside of the professional domain. Clinicians must ensure that non-professional interactions are avoided; which includes seating interpreters and clients in separate areas while the clinician is not present or outside of the assessment. It is important to note, however, in the Republic of Ireland there are no official regulations governing interpreters or necessary qualifications for engaging in this profession.

Pathways to Referral

There are various pathways for referral into Spirasi, depending on the services that a client will need. Typically, referrals for assessment are made either by general practitioners, reception centre medical officers or legal representatives.

Psychosocial Outreach

Spirasi offers outreach services in a number of reception/accommodation centres in the Republic of Ireland and a large proportion of its client base initially link in with the organisation during these outreach sessions. They are advised of the services the organisation offers as well as practical advice for making asylum applications and navigating the international protection system in the Republic of Ireland. Two of the main centres for outreach sessions are Balseskin reception centre in North Dublin and Mosney accommodation centre in County Meath. These sessions are delivered by a member of the

psychosocial team. For those with pressing psychosocial issues requiring prompt assistance, it is common for referrals to be made during these sessions. Referrals in these instances are for psychosocial consultation alone, and clients do not require endorsement by a general practitioner for a one-to-one session with a member of the psychosocial team.

Reception/Accommodation centres

Spirasi is linked in with each of the reception and accommodation centres throughout the Republic of Ireland. Its services are known to the managers and staff within the centres. Many of the referrals received for newly arrived asylum seekers are completed by the medical officers working within the reception centres. This is one of the most common avenues by which clients enter into the service.

General Practitioners

Once they exit the initial reception centres clients may elect a GP and register with a medical practice. As a matter of course, asylum seekers and refugees may avail of a Health Service Executive (HSE) medical card once they have registered with a GP in the Republic of Ireland. Issuance of medical cards is means tested, which is standard practice for nationals and non-nationals. Medical cards entitle the bearer to free access to a GP, most public medical services, and reduced price of €2 for medications available on prescription. In order to be referred for assessment, either Initial Assessment or Medico-legal Report Assessment, clients must be registered with a GP for follow-up care as Spirasi is not a primary care centre. The assessment processes are detailed later in this chapter.

Mental Health Services

Prior to entering Spirasi's services, clients may have had contact with mental health services. The organisation has a number of referrals for Initial Assessment for both asylum seekers and refugees by members of the mental health services, including psychiatrists, counsellors, psychotherapists as well as other mental health workers. As a service that specialises in trauma related care and rehabilitation, often they are the first port of call for clients coming from mental health services. These include both state-run and non-governmental organisations. HSE psychiatric services, rape crisis centres, and private counsellors are examples of such referrers.

Social Workers

After linking in with various services clients are often assigned social workers in these settings, which include hospitals, community care service, services for vulnerable adults, adolescent and youth organisations, as well as child welfare settings. Tusla, or Irish child protective services, are one such example of services from which Spirasi's clients are referred. Tusla regularly works with unaccompanied minors and is responsible for ensuring the welfare of those aged under 18 years in the Republic of Ireland.

Legal Services

Next to general practitioners and reception centre medical officers, legal services account for a high proportion of referrals to Spirasi. A small number of these are for Initial Assessment, while the majority of referrals in these instances are for Medico-Legal Report Assessment. Free legal aid is available to asylum seekers who do not have the means to employ legal representation privately. The Refugee Legal Service (RLS), which works under

the auspices of the Legal Aid Board, is specifically tasked with representing and assisting asylum seekers while navigating the international protection process in the Republic of Ireland. The RLS accounts for the highest proportion of Medico-legal referrals to Spirasi, which is detailed below. Asylum seekers account for 100% of all referrals for Medico-legal Report Assessment.

In cases where the number of clients exceeds the capacity of its legal staff, RLS clients are then referred into the Private Practitioner Scheme. This scheme involves referring clients on to private solicitors at no cost to the clients themselves. However, each client does not have the option to decide who their assigned legal representative will be. This decision is related to case numbers and the availability of representatives at any given point. Conversely, for those who have the financial capacity, there is an option to hire private legal representation for a fee. This option is unrelated to the Refugee Legal Service or Private Practitioner Scheme. However, the number of clients who choose to employ and privately fund legal representation is extremely low.

Walk-in

Self-referred clients present to the service most frequently looking for psychosocial assistance, education services, or in need of psychotherapeutic intervention. Psychosocial drop-ins are facilitated insofar as practicable and dependent on the availability of the psychosocial team for that day. Where clients present in distress, and there is imminent concern for their welfare, a member of the psychotherapeutic team is called to intervene. However, in order to formally access Spirasi's services clients must submit an application to be considered for assessment. This must be endorsed by their GP and, in the case of Medico-legal Report assessment, must be requested by their legal representative.

Education Courses

Spirasi offers a variety of courses to asylum seekers, refugees, and those from other migrant backgrounds. These include QQI (Quality & Qualifications Ireland) accredited courses in Computers, Numeracy and English levels 3, 4, and 5. This is one of the avenues through which clients enter the rehabilitation service in the organisation. Often, clients come to learn about this service from classmates who have been referred into education classes after Initial Assessment or psychosocial consultation.

Referral Procedures for Individual Assessments

Initial Assessment (IA) Referral

IAs are the standard assessment type through which individuals come to Spirasi. The purpose of this type of assessment is to establish the client's trauma history, experiences of torture, legal position, general medical health, test for PTSD, anxiety, depression symptomology, psychotherapeutic and psychosocial need, and from there decide how Spirasi may best help the client. Referrals for IAs are typically made by general practitioners, medical officers in reception centres, primary health care workers or social workers. Self-referrals for IAs are not accepted unless endorsed by a general practitioner. Given the nature of trauma experienced by clients and the potential for re-traumatisation there must be follow-up support available outside of Spirasi. The referral source is asked to provide as much detail as possible about relevant trauma history so that an informed decision can be made regarding Spirasi's ability to assist the client. This includes information related to detention, ill-treatment, and the type of torture, inhuman or degrading treatment experienced.

Clients are asked to recount as much detail as possible relating to this so that the Remit Panel, which is responsible for reviewing referrals, can determine whether they fall

within the threshold of the United Nations Convention Against Torture (UNCAT). They must specify: (i) if they were arrested or detained; (ii) the number of times; (iii) the year and month of detention; (iv) the duration of detention; (v) the country and facility; (vi) the reasons for detention. Where applicable, sufficient detail must also be provided in answer to various questions into the exact nature of ill-treatment: (i) how the client was beaten; (ii) the type of footwear used if kicked; (iii) cut; (iv) burns; (v) suspension; (vi) suffocation; (vii) submersion; (viii) electric shock; (ix) sexual assault; (x) rape; (xi) solitary confinement; (xii) other; (xiii) who the perpetrator was.

Upon receipt of each referral, the rehabilitation administrator forwards these onto the Remit Panel for consideration. The panel typically convenes weekly and is composed of between four to five members of staff representing various areas of expertise within Spirasi. These are an examining physician, therapy co-ordinator, psychosocial co-ordinator, rehabilitation co-ordinator, and CEO. The Remit Panel reviews all referrals received based on the definition of torture as set forth in Article 1 of UNCAT:

> … the term "torture" means any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession, punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity. It does not include pain or suffering arising only from, inherent in or incidental to lawful sanctions (United Nations High Convention Against Torture, 1984).

Having reviewed the referral in correspondence with UNCAT, one of three outcomes is reached: (i) an appointment is offered to the client; (ii) the referral is declined because it

does not meet UNCAT definition of torture (iii) additional information is requested for the review (Spirasi, n.d.).

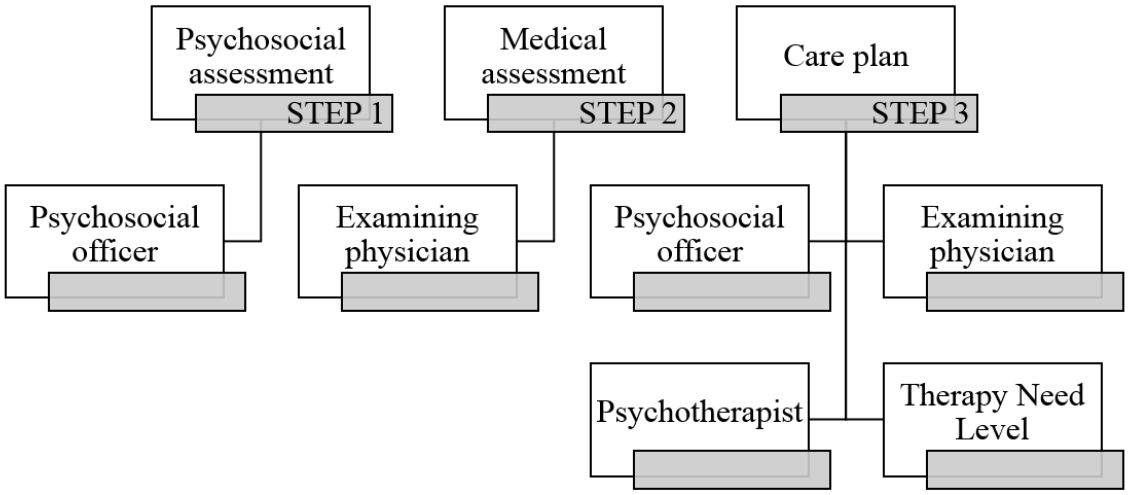
Medico-legal Report (MLR) Referrals

Referrals can only be made through the client's legal representative. Unlike IAs, MLRs are nationally recognised legal documents and are used to support a client's claim for asylum in the Republic of Ireland. MLRs are not offered to refugees and there is no legal necessity for this assessment in such cases. Typically, requests for MLRs are either made by solicitors solely in support of their client's application for asylum or an MLR is recommended by the assessment team following on from an IA. In the former case, those referred for MLR will not have had any contact with Spirasi previously and may not return to the service after the MLR is complete. For others, a Post-MLR IA may be recommended as follow-up if the examining physician believes that the client will benefit from ongoing contact with Spirasi after the MLR. In cases that an MLR is recommended as a result of IA, the client is made aware of this by the examining physician. The client is advised that they should relay this information to their legal representative who is then responsible for requesting an MLR from Spirasi. MLRs cannot be requested from a client or any other third-party.

Individual Assessments

Initial Assessment

Figure 1: Initial Assessment procedure



For those that are offered an IA appointment, usual waiting times are upwards of three months. Clients that attend Spirasi for this assessment vary considerably in terms of the length of time they have resided in the Republic of Ireland. Some may be resident for several months or years. IAs are open to asylum seekers and refugees at any stage in their journeys. Prior to September 2018, three clinicians were tasked with meeting and assessing clients during the IA process. These were an examining physician, psychosocial officer, and psychotherapist. From September 2018 onwards, this three-person assessment system was replaced by a two-clinician assessment procedure, where both the psychosocial officer and examining physician met with the client, while a member of the therapy team is consulted during the care plan for their professional input having not met with the client.

The psychotherapeutic piece is no longer a core component of the assessment with the clients, rather it is overseen by a member of the therapy team who offers professional opinion on the case after reviewing the client's chart. However, s/he does not meet with the client face to face unless immediate psychotherapeutic intervention is required. IAs are typically upwards of two hours in duration. They are conducted as follows:

Psychosocial Component

The first point of contact for the client during IA is the assigned psychosocial officer. S/he is also responsible for co-ordinating the overall assessment and liaising with all members of the IA team. When meeting with the client, s/he is tasked with verifying the information provided for referral, explaining the IA process, obtaining consent, and conducting a psychosocial assessment. Depending on their English language comprehension, clients typically present on their own or are assigned an interpreter by Spirasi. When an interpreter is requested, they are present for the duration of the IA. The psychosocial assessment is completed in the first twenty to thirty minutes of the IA. Aside from verifying referral information, the psychosocial officer makes an assessment on the current psychosocial status of the client. This involves a review of their language skills and literacy, accommodation status, educational achievements and needs, financial status, medical resources and entitlements, and support systems.

Medical Component

In each case, clients are given an option to be assessed by a male or female physician. The physician's role in the IA involves a physical and mental health assessment of the client. This involves a detailed review of any pre-existing ailments, along with a general

examination of their physical health. The physician is also tasked with administering measures for PTSD, C-PTSD, depression and anxiety symptomology. Currently, these are tested using the International Trauma Questionnaire and the Hopkins Symptoms Checklist, respectively.

Care Plan Component

Following from the psychosocial and medical assessments both the assigned psychosocial officer and examining physician, alongside a member of the psychotherapeutic team, meet to discuss the need of the client and what services or interventions Spirasi can offer. In most cases after IA, newly arrived clients are referred to one of Spirasi's Induction Groups. These are offered in both English and non-English with interpreters present. The purpose of these meetings is to offer clients insight into the services that Spirasi provides. They consist of psychoeducation and psychosocial components. From here clients can chose a suitable therapy option (one-to-one, group or family) and arrange for psychosocial consultations.

Medico-Legal Report (MLR) Assessment

These assessments are upwards of two hours in duration and are carried out by a medical doctor. MLRs consist of written and photographic evidence. Medico-legal assessments produce a legal document following the legal standards set out in the Istanbul Protocol UN Manual on the Effective Investigation and Documentation of Torture and other Cruel, Inhuman or Degrading treatment or Punishment. It is produced on the basis of the evidence accumulated during the examination, composing a forensic record of evidence of torture.

Typically, a client will meet with a psychosocial officer in advance of the MLR assessment. During this meeting personal identifiers such as name, age, address, marital and legal status etc., are verified and consent to conduct the assessment is obtained from the client. Assessments are typically conducted through English, but in cases where a client does not have sufficient language proficiency an interpreter is provided by Spirasi for the duration of the assessment. Clients are also given the option of male or female interpreters depending on their preference. Release of MLRs to anyone other than the client's legal representative is prohibited.

Therapy

A major component of Spirasi's services are psychotherapeutic interventions. The function of Spirasi's psychotherapeutic service is twofold: safety building and trauma processing. Clients who partake in psychotherapeutic services are referred via the induction groups through the initial assessment procedure. An important aspect of the induction phase is psychoeducation and informing clients of the physical and mental effects of trauma. Clients may indicate a preference for the type of psychotherapeutic interventions that they require. These include individual, family, and group therapies which take place fortnightly. Individual therapy offers a private, one-to-one space, for clients to process traumatic experiences.

Group therapy emphasises building strength and resilience in a shared setting with other individuals who have experienced trauma related to forced migration. Group therapy is proposed as a steppingstone to individual therapy. It is the preferred entry into one-to-one sessions since it prepares the client for the trauma-processing work involved in individual therapy. Group therapy is varied in Spirasi, the focus of each group is different: body, talking, symbolising. A key component of the group setting is the formation of interpersonal bonds

and building trust through these interactions while sharing personal experiences through various mechanisms in a safe setting.

Family therapy focuses on the client's experience in the context of their immediate support network and systems. This may involve close family members, such as partners, spouses, children, or extended family members and friends. There is no pre-determined limit placed on the number of sessions a client may avail of. Therapy may continue for months or years depending on the nature of the problems.

Chapter Five: Methodology

Introduction

From September 2018 to February 2020, a quantitative analysis of n = 133 randomly sampled client files from the care centre for survivors of torture in the Republic of Ireland, Spirasi, was conducted. These files documented initial assessment and medico-legal report assessments of asylum seekers and refugees accessing Spirasi's services from 2014 to 2017. It was hypothesised that there were 15 variables that were key to understanding psychosocial vulnerability in asylum seekers and refugees. This chapter outlines these variables and sets out the inclusion and exclusion criteria, sampling procedure and instruments used in the study's methodology.

Psychosocial Vulnerability

From the systematic review conducted in Chapter 2, it was hypothesised that there were 15 significant variables that, taken altogether, would explain psychosocial vulnerability in Spirasi's client base. These variables included demographic (age, gender, and marital status), psychological (PTSD/C-PTSD, depression, and anxiety), social (education, employment, family, friends, and language), Trauma (type and frequency), and legal status (asylum seeker and refugee).

Inclusion and Exclusion Criterion

Population

The sample consisted of asylum seekers and refugees resident in the Republic of Ireland who had undergone initial and/or medico-legal assessments at Spirasi.

Age

All cases included clients 18 years or over. Cases relating to those under 18 years of age were omitted from the study.

Client Type

Only those who underwent initial and/or medico-legal assessments at Spirasi were included in this study. Walk-in clients and those in the education service only were not included in this study.

Population, Sample Size and Sampling Strategy

A total sample of 133 cases were used for the analyses. The sample consisted of asylum-seeking and refugee populations, over eighteen years of age, resident in the Republic of Ireland and attending rehabilitation services in Spirasi. Clients who attended the service from 2014 to 2017 were identified using the Spirasi assessment register. Each hardcopy file contained information relating to:

1. Referral forms
2. Assessment forms
3. Psychosocial notes
4. Correspondence between Spirasi and external agencies
5. Medical examination notes and GP correspondence
6. Psychotherapeutic notes
7. Legal correspondence

For the purposes of this study, data was typically extracted from initial and medico-legal assessment forms. Where data was not available through the assessment forms, it was extracted from other sources such as GP correspondence and Salesforce. Cases were randomly sampled from 757 files taken from 2014 through 2017. Each case file had an original Spirasi client ID and these were not numbered consecutively. To facilitate random sampling, a separate study ID was assigned to each file and these were numbered consecutively 1 through 753. Case files from 2017 were numbered 1 through 245; 2016 were 246 through 446; 2015 were 447 through 621; 2014 were 622 through 757. The sample was then determined using a free web-based random integer generator available at www.random.org. This was conducted in three stages:

The first stage comprised a random selection of 80 files, out of which 20 files were chosen from each year. To determine which of Spirasi's case files would be used, the ranges of study ID numbers for each year were input into the integer generator. For example, in order to determine a random sample of 20 case files for 2017 which included study IDs numbered 1 through 245, the following syntax was used: "Generate 20 random integers. Each integer should have a value between 1 and 245. Format in 5 columns". This was repeated for each of the four years with only the integer range changing to correspond to study IDs for a given year.

This strategy was replicated in stage two for an additional 120 cases. Given the nature of the administrative data, and in order to compensate for missing variable information, it was agreed that the sample size would be at least doubled in stage three. This resulted in a final number of 408 cases selected for use in this study. Out of this number, it was decided that only 133 cases contained a suitable amount of data for the analyses. The degree to which information was recorded in each of the assessments and the uniformity of input affected the final useable number of cases.

Over the course of the four years sampled, some clients attended the service twice for both initial and medico-legal assessments; where client numbers appeared more than once in the client register for assessments, the assessment relevant from the year of first contact with the service was used.

Referral Information

Initial assessment and medico-legal assessment referral forms contain information specifying (i) if they were arrested or detained; (ii) the number of times; (iii) the year and month of detention; (iv) the duration of detention; (v) the country and facility; (vi) the reasons for detention. Where applicable, sufficient detail must also be provided in answer to various questions into the exact nature of ill-treatment: (i) how the client was beaten; (ii) type of footwear used if kicked; (iii) cut; (iv) burns; (v) suspension; (vi) suffocation; (vii) submersion; (viii) electric shock; (ix) sexual assault; (x) rape; (xi) solitary confinement; (xii) other; (xiii) who the perpetrator was.

Self-report Measures

<u>International Classification of Diseases-11/ International Trauma Questionnaire</u>

The International Trauma Questionnaire (ITQ: Cloitre et al., 2018) is a self-report diagnostic measure of core symptoms of post-traumatic stress disorder (PTSD) and complex post-traumatic stress disorder (C-PTSD) as defined in the World Health Organisation's International Classification of Diseases, version 11. According to this measure, PTSD is defined by six symptoms across three symptom clusters. These are re-experiencing, avoidance and a sense of threat. C-PTSD is comprised of these symptom clusters as well as

three additional: affective dysregulation, negative self-concept and disturbances in relationships.

Respondent are asked to complete the ITQ in relation to their index trauma event. There are six items measuring each PTSD symptom, and six items measuring each 'Disturbance in Self-Organization' (DSO) symptom. The PTSD items relate to how much the respondent has been bothered by each of these symptoms in the preceding month. The DSO items relate to how the respondent typically feels, thinks about themselves, and relates to others. The PTSD and DSO symptoms are accompanied by three items measuring functional impairment as a result of these symptoms. Responses to each item are measured on a five-point Likert scale. This scale ranges from 0 'Not at all' to 4 'Extremely, with scores on the PTSD and DSO scale ranging from 0 to 24. A symptom is deemed to be present if a score of 2 (Moderately) or above is reported (Cloitre et al., 2018). The psychometric properties of the ITQ have been validated in general (e.g., Ben-Ezra et al., 2018; Cloitre et al., 2018) and clinical (e.g., Hyland et al., 2017; Karatzias et al., 2016) samples. The internal reliability (Cronbach's alpha) of the PTSD ($\alpha = .90$) and DSO ($\alpha = .93$) items is excellent.

A probable diagnosis of PTSD necessitates that (a) the respondent had experienced at least one traumatic life event, (b) at least one symptom was present from each of the PTSD symptom clusters (Re-experiencing, Avoidance, and Sense of Threat), and (c) at least one indicator of functional impairment associated with these symptoms is endorsed. A diagnosis of C-PTSD requires that (a) all of the PTSD criteria are met, and (b) at least one symptom is endorsed from each DSO cluster (Affective Dysregulation, Negative Self-Concept, and Disturbed Relationships) and, (c) at least one indicator of functional impairment related to these symptoms is indicated. Respondents may be diagnosed with either PTSD or C-PTSD, but not both.

PTSD Checklist Civilian Version (PCL-C)

There are three versions of the PCL; however, there is no variation in scoring across all three. The PCL-M is administered to military personnel, with questions pertaining to 'a stressful military experience'. The PCL-C is a general civilian version of the PCL but is not linked to any particular event. This measure can be used with any population. In this instance respondents answer questions referring to 'a stressful experience from the past'. The PCL-S can be administered referring to any specific traumatic event. In this case, respondents are asked to select a particular event, with questions then pertaining to this 'stressful experience'.

The PTSD Checklist Civilian Version (PCL-C:) is a seventeen item, self-report measure. It takes on average 10 to 15 minutes to complete. The PCL-C tests for symptoms of PTSD in civilian groups, rating symptom severity on a five-point Likert scale, ranging from 1 "not at all" to 5 "extremely". The measure is scored using the DSM 4 criteria for PTSD diagnosis. Respondents are asked the extent to which they have been affected by symptoms over the previous month. Total possible scores range from 17 to 85.

There is no fixed means of deciding the 'correct' cut-off score for the PCL. One strategy recommended is to use individual items according to the DSM criteria (one or more symptom from items 1 - 5, and three or more from items 6 - 12, and additionally, at least two from items 13 - 17). A cut-off score of 3 or more for each item is suggested in this instance. Additionally, several other cut-off scores have been suggested for diagnosis, however, this is population dependent: active duty veterans Iraq/Afghanistan (Bliese et al., 2008: 28); civilian substance abuse residential (Harrington et al., 2007: 44); civilian primary care (Sherman et al., 2005: 30-38); civilian motor vehicle accidents (Blanchard et al., 1996). The PCL has demonstrated strong psychometric properties. Internal reliability (Cronbach's alpha) ranges between α =.94 (Blanchard et al., 1996) to α =.97 (Weathers et al., 1993).

Hopkins Symptoms Checklist-25 (HSCL-25)

The HSCL-25 is a twenty-five item, symptom inventory which measures symptoms of both depression and anxiety. It has been used widely with forced migrant populations (Hollifield et al., 2002). Part one of the checklist deals with symptoms of anxiety, across ten items. Part two comprises fifteen items measuring depressive symptomology. Symptoms are scored on a 4-point scale, ranging from 1 'not at all' to 4 'extremely'. Two scores are calculated. The average of all 25 items is taken as the total score. Depression scores are calculated using the 15 depression items. It has been demonstrated, across several populations, that the total score is highly correlated with severe emotional distress of unspecified diagnosis. It demonstrates good predictive validity for diagnosed depression (SN = 0.88; SP = 0.73); the depression score is correlated with major depression as accounted in the Diagnostic and Statistical Manual, version 4. The HSCL-25 has demonstrated sound reliability in clinical refugee samples (Hocking et al., 2018; Hollifield et al., 2002). It has demonstrated excellent test-retest reliability (r = 0.89) and internal consistency, which has been found to exceed 0.88 in refugee samples (Hollifield et al., 2002).

The HSCL-25 has also been validated against several instruments including the Structured Clinical Interview for DSM, version IV (SCID - IV) (Kaaya et al., 2003), the Composite International Diagnostic for International Classification of Diseases 9 (CIDI1) (Sandanger et al. 1998), and the Composite International Diagnostic for International Classification of Diseases 10 (CIDI2) (Sandanger et al. 1999). When validated against the Structured Clinical Interview for Diagnosis (SCID), kappa coefficients ranged between 0.65 and 0.85; sensitivity between 0.75 and 0.92; specificity between 0.90 and 0.99; positive predictive values (PPV) between 0.60 and 0.86; negative predictive values (NPV) between 0.92 and 0.99; and accuracy between 0.88 and 0.98 (De Azevedo et al., 2008).

Spirasi Assessment Instruments

Initial Assessment

The IA form contains demographic, psychosocial, psychological, and medical information gathered during a two-hour assessment conducted by three clinicians (psychosocial officer, medical doctor and psychotherapist). Basic personal information and psychosocial notes, alongside consent at assessment are entered at the beginning of the assessment form. This is followed by the physician component which begins with a summary of the client's history. This is accompanied by current physical symptoms, current medications, past medical, psychiatric and surgical history. Communicable diseases such as HIV, hepatitis C, hepatitis B, sexually transmitted diseases, and tuberculosis are noted. Psychological state is also detailed: cognition, mood, physiological, behavioural. This also incorporates somatic indicators and traumatic events. Two self-report measures for PTSD/C-PTSD, anxiety and depression, respectively, are included.

Physical examination notes include height and weight, cardiovascular system check, lungs, abdomen, musculoskeletal and skin observations. Mental state is evaluated according to appearance and behaviour, speech, mood, and affect; alongside thought form, thought content, beliefs and perception, cognition, and insight.

The psychotherapeutic component contains information on main issues impacting the client, client's presenting issues for therapy, and trauma history. This also includes details on psychiatric history, current emotional state, suicide risk, as well as internal and external resources. A therapy needs assessment scale is administered and preference for therapy type is noted.

Medico-legal Report Assessment

The MLR assessment produces a legal document containing both written and photographic records relating to a client's claim of torture. This assessment is usually two hours in duration and is conducted by a medical doctor. The MLR assessment form is similar in structure to the IA; however, only particular sections of the form are filled out for the assessment. The MLR assessment form contains sections used in the IA for use if a post-MLR IA is conducted. If not, these parts remain blank. For MLR only use, details entered include basic personal information and some psychosocial notes, depending upon the preference of the assisting psychosocial officer; a detailed list of documents used in compiling the MLR including historical details restricted to those aspects that the physician considers relevant to physical or psychological findings. This includes a detailed account of circumstances leading to claim for asylum, also prefaced by a summary of this claim. Again, two self-report measures for PTSD/C-PTSD, anxiety and depression, respectively, are included as with the IA form. The final MLR document/report which is submitted for legal review is completed separately from the assessment form itself.

Research Ethics

This study was approved for commencement in 2018 by Ulster University, Northern Ireland, and in the Republic of Ireland by Trinity College Dublin. As Spirasi does not have an independent ethics board, this study was approved by Trinity College Dublin on its behalf.

Informed Consent

Consent to use this data for research purposes was obtained retroactively as part of the assessment procedure at Spirasi. In each case the respective client agreed that their

information may be used for internal and external research and reporting purposes. The psychosocial officer assigned to each case was responsible for obtaining consent. If a client did not or could not reliably consent to the assessment it was terminated and was not included in this study. In order to obtain informed consent, where an interpreter was needed, one was provided. The interpreter was then present for the entire process whether initial assessment or MLR unless otherwise requested by the client and approved by the clinicians. Interpreters were required to translate each statement of consent as they are written and verbally relay to the client in English.

As in the case of consent obtained from clients who speak English, clients who did not speak English gave their consent as 'yes' in the language they are most proficient. This agreement is then translated to the psychosocial officer by the interpreter. It is the responsibility of the psychosocial officer to ensure, to their fullest capacity, that respective clients understand precisely what they are consenting to. Spirasi follows a robust procedure in devising its consent forms; its legal representatives regularly review the processes for seeking and obtaining consent at assessment.

Discussion

This chapter began with the hypothesis that there were 15 significant variables that, taken altogether, would explain psychosocial vulnerability in Spirasi's client base. The inclusion and exclusion criteria were determined based up the estimation of which population, age, and client type would most accurately represent Spirasi's service users.

A total sample of n = 133 cases were used for the analyses. The sample consisted of asylum-seeking and refugee populations, eighteen years and over, resident in the Republic of

Ireland and attending rehabilitation services in Spirasi. Clients who attended the service from 2014 to 2017 were identified using the Spirasi assessment register.

The referral information gathered routinely from clients was outlined in order to assess their suitability for assessment as well as the self-report measures and assessment instruments used at Spirasi. The information extracted from these data served as the basis for the analyses that are delineated in the following chapters.

Given the nature of administrative data, there were several limitations that should be accounted for. The study began with a selection of 400 files but due to the level of missing and uninterpretable data a vast proportion of this could not be used. Some data was missing key components including mental health assessment data which was required for this study. Furthermore, many of the files which had been selected were archived and could not easily be accessed.

Conclusion

Chapter 5 described the method used in this study. It described a quantitative methodology using n = 133 randomly sample client files from the care centre for survivors of torture in the Republic of Ireland, Spirasi. This study used information from initial assessment and medico-legal report assessments with service users from 2014 to 2017. These assessments are described in detail in the previous chapter. Using the available data, it was hypothesised that there were 15 variables that were key to understanding psychosocial vulnerability in asylum seekers and refugees.

Chapter Six: Descriptive Statistics

Introduction

This chapter provides a detailed description of a sample of Spirasi's clients who accessed their services over a period of 48 months, from 2014 through 2017. It includes basic demographic information of the organisation's service users as well as descriptive statistics relating to their migration characteristics, application stages, trauma exposure, therapy needs assessments scores, endorsement rates for somatic indicators, and probable diagnostic rates for PTSD, C-PTSD, depression and anxiety. Chapter 6 closes by comparing the descriptive statistics of Spirasi's service users with trends across Europe and discusses how the organisation's client base fall within or without European norms.

Demographic Characteristics

Table 3 summarises the demographic characteristics of the study population (n = 133), taken from a random sample of client assessments conducted between 2014 and 2017. The mean age of the sample was 36.61 years with a range of 19 to 67. 56.8% of the sample originated from Africa, 36.6% from Asia and 7% came from Europe. The majority (60.9%) were male. Of the n = 133 participants, n = 68 were single, n = 44 married, n = 2 had partners, n = 1 was cohabiting, n = 4 were divorced, n = 8 separated, and n = 3 widowed. Over half of the sample reported having no dependents either living in the Republic of Ireland or abroad (59.8%, 78.6%). The count of dependents living abroad included those remaining in the country of origin, another jurisdiction, or those whose whereabouts were unknown. 23.6% had between 1 and 2 dependents in the Republic of Ireland, while 15.9% of the sample had the same number of dependents living abroad. 16.6% had between 3 and 5

children residing in the Republic of Ireland and 1.6% with the same number living abroad. Only 1 participant had 6 or more children outside of the Republic of Ireland.

Table 3: Demographic characteristics of study participants

	Mean	***SD***
Age (years)	36.61	9.34
	N	**%**
Gender		
Male	81	60.9
Female	52	39.1
Marital Status		
Single	68	52.3
Married	44	33.8
Have partner	2	1.5
Co-habiting	1	.8
Divorced	4	3.1
Separated	8	6.2
Widowed	3	2.3
Place of origin		
Europe	11	7
Asia	46	36.6
Africa	76	56.8
No. of Children		
In other country		
0	76	59.8
1-2	30	23.6
3-5	18	16.6

In the Republic of Ireland		
0	99	78.6
1-2	20	15.9
3-5	6	1.6
≥6	1	0.8

Migration Characteristics and Residency Profiles

Table 4 summarises the migration characteristics and residency profiles of the study sample. The majority (85.7%) of participants were living in government funded, Direct Provision. Currently in the Republic of Ireland, Adults living in Direct Provision are entitled to bed and board and a daily expenses allowance which is paid weekly at €38.80. 13.5% lived in private accommodation, either with friends or family, or alone. For asylum seekers who resided in private accommodation, the daily expenses allowance was suspended. 1 participant was homeless. Over half of the sample (66.3%) arrived in the Republic of Ireland between 2011 and 2015, and just over one-third (33.7%) between 2016 and 2017. 9.9% arrived over a 5-year period, between 2006 and 2010. 4.9% of the sample arrived in the Republic of Ireland between 1992 and 2005. Participants' first recorded contact with Spirasi was between 2013 and 2017. A total of n = 50 first contacted the service between 2016 and 2017, while the majority (n = 77) entered the service between 2013 and 2015. Residency was divided into four categories: asylum seekers accounted for 88.7% of the sample; the remaining 11.3% was distributed refugees (3.8%), EU/Irish Citizens (3.8%), and others (3.8%).

Table 4: Migration characteristics of study participants

	N	**%**
Accommodation		
Direct Provision	114	85.7
Private	18	13.5
Homeless	1	0.8
Time		
Arrived in the Republic of Ireland		
1992-2000	3	2.5
2001-2005	3	2.4
2006-2010	12	9.9
2011-2015	81	66.3
2016-2017	23	33.7
First Contact with Spirasi		
2013-2015	77	60.6
2016-2017	50	39.4
Residency		
Asylum Seeker	118	88.7
Refugee	5	3.8
EU/Irish Citizen	5	3.8
Other	5	3.8

Application Stage

Table 5 summarises application information of study participants. Participants were classified according to one of seven application categories, which included those in operation both prior to and after the International Protection Act effected in 2015. This change saw the introduction of a single procedure where applicants would be considered for refugee status

and subsidiary protection through one application. The majority of the sample (62.1%) were ORAC applicants, awaiting first instance decision on their application for refugee status. 15.2% were at appeal stage (RAT). 3.8% of cases were under judicial review (higher court appeals against decision of RAT). 4.6% were applying for subsidiary protection either under ORAC (pre-International Protection Act 2015) or through RAT (pre- and post-International Protection Act 2015). Only 2.3% of participants were at IPO stage (post-International Protection Act 2015).

A total of 97 participants were referred into Spirasi's rehabilitation services through general practitioners. Other medical practitioners, such as psychiatric services and assistant medical officers, accounted for n = 10 of the referrals. A total of n = 17 referrals were submitted by solicitors. Internal referrals by Spirasi clinicians accounted for n = 7 of the cases, while social workers and other individuals/bodies (e.g., NGOs) submitted the remaining n = 9 referrals.

The majority (76.9%) of the sample were given legal representation either from the Refugee Legal Service (RLS) or their Private Practitioner Scheme. A small percentage (12.3%) of participants incurred privately funded legal representation.

State subsidised health care was available to most (94.2%) participants. This falls under the General Medical Services scheme which covers the majority of medical costs for medical card holders.

Table 5: Application information of study participants

	N	**%**
Application Stage		
ORAC	82	62.1
RAT	20	15.2
Judicial Review	5	3.8
Deportation	1	0.8
Subsidiary Protection ORAC	5	3.8
Subsidiary Protection RAT	1	0.8
IPO	3	2.3
Not Applicable	15	11.4
Referrer		
GP	90	67.7
Other Medical Professional	10	7.5
Solicitor	17	12.8
Social Worker	5	3.8
Internal Referral	7	5.3
Other	4	3.0
Legal		
RLS inc. Private Practitioner by RLS	100	76.9
Privately Funded	16	12.3
Not Applicable	14	10.8
Medical		
GMS	97	94.2

Rates of Traumatic Exposure

Table 6 refers to the traumatic experiences of the study population, stratified according to gender. The most frequently (75.3%) endorsed trauma experienced by males was having been in danger of losing their lives. This was also true for females who endorsed this item at a rate of 55.8%. Physical violence by authorities or armed groups was significantly higher for males (64.2%) than females (36.5%). The least (8.6%) endorsed item for males was sexual assault or rape; conversely, this was the second highest (50%) trauma experienced by females. The least (17.3%) endorsed item for females was solitary confinement or isolation. Experience of torture was the single item endorsed at an equal rate (48.1%) for both males and females. For males, experience of torture was equal (48.1%) to that of witnessing others being killed. While, for females, witnessing others being killed (34.6%) was endorsed at the same rate of experiencing the violent death of relatives. Similarly, witnessing the torture of others was experienced at the same rate (40.4%) as living in hiding, for the female proportion of the sample

Table 6: Direct and indirect trauma exposure of study participants

	Total	***Male***	***Female***	χ^2 ***(df) p***
	***N* (%)**	***N* (%)**	***N* (%)**	
Deprivation of liberty	68 (51.1)	43 (53.1)	25 (48.1)	0.318 (1) .57
Combat situation	25 (18.8)	10 (12.3)	15 (28.8)	5.64 (1) .017
Living in hiding	62 (46.6)	41 (50.6)	21 (40.4)	1.33 (1) .248
Experienced physical violence by authorities or armed groups	71 (53.4)	52 (64.2)	19 (36.5)	9.73 (1) .002
Experienced torture	64 (48.1)	39 (48.1)	25 (48.1)	0.000 (1) .994
Experienced sexual assault, rape	33 (24.8)	7 (8.6)	26 (50)	29.037 (1) <.001
Experienced solitary confinement, isolation	28 (21.1)	19 (23.5)	9 (17.3)	0.720 (1) .396
Been in danger of losing life	90 (67.7)	61 (75.3)	29 (55.8)	5.527 (1) .019
Witnessed torture	68 (51.1)	47 (58)	21 (40.4)	3.944 (1) .047
Witnessed killing	57 (42.9)	39 (48.1)	18 (34.6)	2.368 (1) .124
Violent death of relatives	49 (36.8)	31 (38.3)	18 (34.6)	0.182 (1) .670
Disappeared relatives	46 (34.6)	24 (29.6)	22 (42.3)	2.250 (1) .134
Forcedly separated from relatives	32 (24.1)	16 (19.8)	16 (30.8)	2.103 (1) .147

Needs Assessment

Table 7 refers to participants' needs assessment, stratified according to gender. Type-two trauma was the highest endorsed item for males (84.4%) and the second highest (84%) for females. In the entire sample, however, it was the overall highest (84.3%) endorsed item. Depression was the most frequently endorsed item (89.8%) among the female proportion of the overall sample. While the prevalence rate of depressive symptoms among males was 12.9% less than their female counterparts. Current suicidal ideation was higher (44.9%) among females than males (34.6%). This trend held true for 2 out of the 3 items relating to suicidality. Females also reported a greater tendency towards planning suicide (12.2%). However, males scored marginally higher (40.3%) than females (37.5%) in terms of a history of suicidality or self-harm. Experience of torture was more prevalent among females (62%). However, males consistently showed higher endorsement rates in terms of failed refugee status (35.1%), physical illness (59.7%), and substance abuse (10.3%). Similar rates (10.3%, 10.4%) were found for both genders in terms of the percentage living outside Direct Provision.

Table 7: Therapy risk assessment scale scores for study participants

	Total	***Male***	***Female***	χ^2 ***(df) p***
	N (%)	***N* (%)**	***N* (%)**	
History of suicidality/Previous attempts self-harm	49 (39.2)	31 (40.3)	18 (37.5)	0.094 (1) .759
Current suicidal ideation	49 (38.6)	27 (34.6)	22 (44.9)	1.343 (1) .247
If yes, have you made a plan?	14 (11)	8 (10.3)	6 (12.2)	0.121 (1) .728
Type 2 Trauma[1]	107 (84.3)	65 (84.4)	42 (84)	0.004 (1) .950
Torture history (UN Convention)	73 (57.4)	42 (54.5)	31 (62)	0.689 (1) .406
Depression	104 (81.9)	60 (76.9)	44 (89.8)	3.363 (1) .067
Failed application for refugee status	37 (29.6)	27 (35.1)	10 (20.8)	2.874 (1) .090
Physical illness	66 (52.4)	46 (59.7)	20 (40.8)	4.299 (1) .038
Substance abuse	10 (7.9)	8 (10.3)	2 (4.1)	1.582 (1) .209
Living outside direct provision	13 (10.3)	8 (10.3)	5 (10.4)	0.001 (1) .977

Note: [1]Rape, sexual violence, physical & psychological trauma

Somatic Indicators

Table 8 summarises the endorsement rates for somatic symptoms presented during the assessment procedure, stratified here according to gender. Headache was the most common physical complaint across both genders (male = 68%, female = 65.8%). Additionally, tenseness was reported as the second-most common somatic indicator for both males (62.2%) and females (56.3%). There was minimal difference in the endorsement rates for backache (male = 47%, female = 47.7%) and breathing difficulties (male = 30.3%, female = 31.1%) for both genders and this was the third-most prevalent physical complaint. The most significant difference between males (16.7%) and females (46.5%) related to cardiac complaints, specifically experiencing palpitations. Both urination (male = 12.3%, female = 4.6%) and sleep difficulties (male = 3.3%, female = 8.9%) were the least endorsed items.

Table 8: Somatic indicators of study participants

	Total	***Male***	***Female***	χ^2 ***(df) p***
	N (%)	***N* (%)**	***N* (%)**	
Stomach-ache	36 (32.1)	22 (31.4)	14(33.3)	0.102 (2) .950
Headache	77 (65.8)	49 (68)	28 (65.8)	0.464 (2) .793
Backache	52 (47.3)	31 (47)	21 (47.7)	0.774 (2) .679
Palpitations	36 (34.9)	16 (16.7)	20 (46.5)	8.057 (2) .018
Difficult to Breathe	34 (30.6)	20 (30.3)	14 (31.1)	1.832 (2) .400
Tenseness	65 (59.6)	38 (62.2)	27 (56.3)	2.170 (2) .338
Difficulty Urinating	10 (9.3)	8 (12.3)	2 (4.6)	2.745 (2) .254
Sleep	6 (5.7)	2 (3.3)	4 (8.9)	1.473 (1) .225

Probable Diagnostic Rates

Table 9 summarises probable diagnostic rates of PTSD, C-PTSD, anxiety, and depression across the study sample, stratified according to gender. Anxiety was the most prevalent (80.2%) mental illness experienced by the male cohort with higher scores for diagnoses in comparison with females (69.2%). Conversely, prevalence rates for depression (75%) and C-PTSD (11.5%) were highest among the female portion of the sample. However, PTSD rates were marginally higher among males (8.9%) than females (7.7%).

Table 9: Probable diagnosis of PTSD, CPTSD, anxiety and depression in study population

	Total ***N (%)***	***Male*** ***N* (%)**	***Female*** ***N* (%)**	χ^2 ***(df) p***
CPTSD	12 (9.2)	6 (7.6)	6 (11.5)	0.613 (2) .736
PTSD	11 (8.4)	7 (8.9)	4 (7.7)	
No dx	66 (83.5)	42 (80.8)	108 (82.4)	
Anxiety	101 (75.9)	65 (80.2)	36 (69.2)	2.103 (1) .147
Depression	98 (73.7)	59 (72.8)	39 (75)	0.076 (1) .782

Discussion

The descriptive data provided in this chapter seems largely in line with previous research findings, in terms of continents of origin. Both African and Asian nations were shown to be the most frequently cited countries of exile. However, the rank of individual countries seeking asylum within these continents differs across the majority of studies. The present study included n = 133 participants from 37 countries of origin; n = 76 (56.8%)

participants came from Africa while *n* = 46 (36.6%) originated from Asia, and *n* = 11 (7%) from Europe. The largest proportion of participants in this study originated from the Democratic Republic of Congo (12.8%), similar to Hodges-Wu and Zajicek-Farber's (2017) report. However, this was not reported by the remaining literature. Additionally, interestingly AIDA's official statistic for asylum intake in the Republic of Ireland in 2018 does not include the Democratic Republic of Congo among its countries of origin. Rather, Albania accounted for the highest number of asylum applications in 2018.

This indicates a change in the countries of origin from which protection applicants in the Republic of Ireland have originated over the period of data included in this research. Afghanistan nationals accounted for the largest proportion *n* = 15 (11.3%) of Asian participants in this sample. This finding emulates AIDA's official statistic for the UK's highest number of protection applicants in 2018. Indeed, Afghanistan nationals accounted for varying proportions of protection applications across all of the European-based studies included in this text. Notably, this was not the case in studies conducted outside of Europe.

Ukraine accounted for the largest proportion *n* = 3 (2.3%) of European protection applicants in the present study. Germany was the only other country, as reported by AIDA (2019), to also include Ukrainian nationals amongst protection applicants for 2018. Ukraine was not mentioned as a country of significance in any other piece of literature included in this work.

60.9% (*n* = 81) of the participants in the present study identified as male. This was slightly above official figures (51.8%) published by AIDA for 2018. This type of gender breakdown was largely reflected across each of the texts and official statistics cited in this text. Sweden, in particular, showed an almost identical rate of males applying for protection as the number reflected in the present study. A Sicilian study by Crepet et al. (2017) was the

only study to report almost identical rates of males and females in its sample. Furthermore, only one study (Nickerson et al., 2014) included in the present work reported a higher rate of females than males, however, there was little variance between the two genders in the study (males = 48%, female = 52%). Interestingly, this study was also conducted outside of Europe.

Additionally, findings in the present study regarding relationship status were overall representative of the cited literature in terms of the two highest endorsed relationship statuses; these were 'single' and 'married'. 52.3 % of participants in the present study reported being unmarried, while 33.8% were married. However, the highest endorsed item related to relationship status in most other studies was 'married' and the second highest was 'single'. The highest proportion of married participants was reported by Alpak et al. (2015) at 86.4%. Additionally, the highest percentage of single participants was 24%, reported by Diaz et al. (2015). The present study exceeded the figures reported by Diaz et al. (2015) by over 100%.

88.7% (n = 118) of participants in the present study were asylum seekers and 3.8% (n = 5) were refugees. This was similar to the overall population count across all studies. However, the present study represented this on a much smaller scale. This result is related primarily to the population who Spirasi was providing services to from 2013/2014 to 2017. These were mostly 'newly landed' asylum seekers.

Each of the indirect and direct traumatic experiences (Table 6) were corroborated in each of the cited studies. This, however, was to varying degrees and rank. While having been in danger of losing one's life was the highest endorsed trauma item in the present study, only one other paper (Nickerson et al., 2014) replicated this finding. Experiencing or witnessing death, violence, and war were the most significant items cited in the remaining studies (Crepet et al., 2017; Alpak et al., 2015).

Extant literature reports PTSD as being the most pervasive mental health disorder amongst asylum seekers and refugees (Georgiadou et al., 2017; Crepet et al., 2017; Cleveland et al., 2018). However, the present sample deviated significantly from this norm. 9.2% (*n* = 12) of participants in this study met the criteria for probable diagnosis of C-PTSD. This is quite surprising given that historically research has reported prevalence rates of C-PTSD to be lower than PTSD (Teegen & Vogt, 2002; De Jong et al., 2005; Teodorescu et al., 2012; Palic & Elklit, 2014).

Only 8.4% (*n* = 11) of participants reached the threshold for probable diagnosis of PTSD. 75.6% (*n* = 101) met scores for probable diagnosis of anxiety. This was the most pervasive mental health disorder in this sample. This is particularly noteworthy since anxiety appears at a lower scale of mental disorders in much of the available literature. Furthermore, the threshold for probable diagnosis of depression was reached by 73.7% (*n* = 98) of participants, again deviating from general research findings. Significantly, a large proportion of participants (*n* = 66, 83.5%) did not meet the requirements for diagnosis with PTSD, C-PTSD, depression or anxiety.

Additionally, research showed that somatisation was increasingly related to PTSD as opposed to any other form of mental ill-health among asylum seekers and refugees. Much of the literature used the same instrument testing for somatic indicators (SCL-90) – 12 item subscale testing for symptoms including 1) soreness of muscles, (2) numbness or tingling in part of the body, (3) pains in lower back, (4) heavy feeling in your arms or legs, (5) feeling weak in parts of your body, (6) trouble getting your breath, (7) pains in heart or chest, (8) faintness or dizziness, (9) headaches (10) nausea or upset stomach, (11) lump in your throat, (12) hot or cold spells. The instrument used for measuring somatic indicators in this study included only 4 items from this checklist. It was not ascertained whether these were correlated with a particular mental health disorder.

Conclusion

This chapter presented a detailed description of Spirasi service users who accessed the organisation from January 2014 to December 2017. Chapter 6 described the demographic information of the organisation's service users as well as presenting the descriptive statistics relating to their migration characteristics, application stages, trauma exposure, therapy needs assessments scores, endorsement rates for somatic indicators, and probable diagnostic rates for PTSD, C-PTSD, depression and anxiety. It concluded by comparing the descriptive statistics of Spirasi's service users with trends across Europe which were discussed in Chapter 3; and it explained how the organisation's client base fall within or without European norms.

Chapter Seven: Latent Class Profiles of Trauma Exposure

Introduction

The previous chapter showed that a 'one size fits all' approach does not accurately capture the varied experiences of asylum seekers and refugees and their journey through forced migration. Chapter 3, which explored the literature on forced migration, predominantly in Europe, illustrated the need for an in-depth analysis of these populations, particularly with a view to understanding varied trauma profiles. To this end, Latent Class Analysis (LCA) of the administrative data gathered from n = 133 service users files at Spirasi was conducted. It was hypothesised that a number of latent trauma classes could be identified from the data and that these classes, in turn, could be assigned 'low', 'medium', and 'high' risk labels. From this, it was theorised that the LCA could identify subgroups of polyvictimised asylum seekers and refugees from the data. The model was based on Spirasi's Therapy Needs Assessment which is mentioned in chapter 6. The present chapter describes the LCA, the 3-class model, and the results that were derived from the analysis

Trauma DSM-III

The Diagnostic and Statistical Manual of Mental Disorders, 3rd edition (DSM-III), published in 1980, first elaborated traumatology as a branch of knowledge in psychiatric discourse (American Psychiatric Association, 1980). It was in this text where the concept of PTSD as a psychiatric disorder and the criteria for diagnosis were initially defined. The American Psychiatric Association first characterised trauma as an event "outside the range of usual human experience" (American Psychiatric Association, 1980, p. 236), thus suggesting that traumatic exposure was the exception rather than the norm. Succeeding research

challenged this theory, and instead posited the notion that trauma was more frequently experienced across a wider range of populations than the DSM-III initially suggested.

Trauma DSM-IV

The DSM-IV published some fourteen years later, elaborated a more nuanced concept of trauma as well as allowing for both direct and indirect exposure (American Psychiatric Association, 1994). It accepted that psychologically disturbing occurrences including traffic accidents, death of relatives, and natural disasters, were salient events that qualified as potentially traumatic. This also acknowledged the idea that an individual could be traumatically affected by an event without directly experiencing it. This resulted in a 59% increase in trauma diagnoses (Breslau & Kessler, 2001). However, assessments for diagnoses focused on singular events rather than those that were prolonged, repeated, or multiple, cumulative traumas (O'Donnell et al., 2017).

Trauma DSM-V

In 2013, the American Psychiatric Association published the DSM-V which included a renewed elaboration of traumatic events, as well as acknowledging frequency and traumatic load as salient factors in assessing trauma (American Psychiatric Association, 2013). For example, sexual violence was elevated and included among the new criteria for diagnosis as opposed to limited inclusion in the descriptive text (O'Donnell et al., 2017). Furthermore, learning that a traumatic event had happened to a close family member was then also included in the diagnostic specification. Most notably, there was explicit acknowledgment that frequency of traumatic events was a critical factor for diagnosis (O'Donnell et al., 2017).

Type, Frequency, or Multiple Traumatic Exposures?

There has been much debate as to the level of importance that should be attributed to various aspects of trauma. Theorists have discussed whether type, frequency or multiple traumatic exposure carry greater weight when assessing trauma history and potential mental health outcomes (Houston et al., 2011). Wilker et al. (2015) theorised that retrospective assessments of cumulative traumatic experiences, using measures such as the LEC which assess the number of different traumatic event types, were the most appropriate form of assessment. They theorised that assessments which observe the frequency of specific, individual traumas are less reliable (Wiker et al., 2015; Neuner et al., 2004). Others have remarked that singular traumatic events, that is events that may only occur once, can have the most significant impact on mental health, specifically trauma related to interpersonal violence (Forbes et al., 2012). While research elsewhere suggests that cumulative trauma and traumatic load are more applicable for assessing the impact that traumatic exposure will have (Karam et al., 2014).

Co-occurrence and Polyvictimization

Additional investigations have demonstrated that co-occurrence is a salient risk factor for traumatic exposure itself. Those who experience one trauma are, research suggests, more vulnerable to subsequent traumatic exposure (O'Donnell et al., 2017). This may be multiple experiences of the same trauma or indeed a variety of traumatic experiences. For example, women who have experienced sexual violence in childhood or adolescence are at an increased risk for victimisation later in life (Gidycz et al., 1993). Childhood and adolescent trauma are frequently cited as a gateway to experiencing multiple traumas in later years (Menard et al., 2004; Havlicek, 2014; Adam et al., 2016; Armour et al., 2011; Ballard et al.,

2015). This is true also in cases of forced migration where asylum seekers and refugees frequently fall into the realm of co-occurrence, where traumatic events arise pre-migration, peri-migration, and post-migration.

This appears to buttress claims that certain traumas affect particular sub-groups as opposed to being randomly distributed among the general population (Houston et al., 2011; O'Donnell et al., 2017). That is to say, experience of one particular type of trauma increases the risk of experiencing another particular type of trauma (Houston et al., 2011). Therefore, it may be possible to identify particular polyvictimised sub-groups or classes. For example, childhood physical abuse often co-occurs with neglect, this may manifest in an environment of substance abuse and parental mental health disorders. These multiple traumatic experiences may take place in an interrelated pattern (O'Donnell et al., 2017; Rees et al., 2011; Steel et al., 2009).

Latent Class Analysis (LCA)

Since trauma assessment is significantly nuanced it may be said that a more person-focused analyses is warranted when investigating trauma exposed populations. It has been argued that analytic methods such as latent class and cluster analyses, which consider the heterogeneity of trauma exposed populations, are preferred (O'Donnell et al., 2017; Houston et al., 2011). A recent systematic review of person-centered approaches to investigating patterns of trauma exposure (O'Donnell et al., 2017) found that despite traumatic events being heterogenous, homogenous sub-groups who experience polyvictimisation could be identified. This substantiated the notion that trauma history is more appropriately characterised in terms of class rather than summative score (O'Donnell et al., 2017).

LCA is a statistical approach used to describe population heterogeneity. This method was first published by Lazarsfeld and Henry in 1968. LCA assumes that there is a categorical, unobserved variable which separates a single population into mutually exclusive and exhaustive latent or unobserved classes (Lanza & Rhoades, 2011). Although classes cannot be directly measured, they are inferred in LCA by separating and categorising individuals in any given sample into distinct classes using the observed categorical variables (Nylund et al., 2007).

Classes are defined based on conditional probabilities; that is, for example, the probability that 'y' will occur if 'x' has previously occurred and so on. LCA allows for multiple aspects of trauma exposure to be considered in the analysis as opposed to focusing solely on single indicators of trauma exposure (O'Donnell et al., 2017). LCA has been adopted as a favoured analytic method in trauma research given that it identifies a single solution based on maximum likelihood and provides fit indices which show the appropriateness of the model for the study sample (O'Donnell et al., 2017).

This study employed LCA, a mixture model, to identify classes or subgroups of polyvictimised individuals from a dataset of n = 133 asylum seekers and refugees partaking in Spirasi's rehabilitation service. The LCA was conducted using Mplus (Muthén & Muthén, 1998). During assessments at Spirasi, participants were asked if they had experienced at least one of 13 types of traumatic exposure, these were bvarious direct and indirect traumas.

The surveyed literature has shown that these 13 trauma-types are widely recognised as the most prevalent forms of exposure across asylum-seeking and refugee populations. For instance, in a study of 50 Cambodian refugees resident in the United States, Carlson and Rosser-Hogan (1994) found that severity of trauma, near death experience and threat to survival predicted PTSD. Additionally, loss of close attachments, such as separation from

one's family, has been shown to increase the risk of depression (Momartin et al., 2004; Kroll et al., 1989; Carlson & Rosser-Hogan, 1994).

Results

A total of *n* = 133 client files from Spirasi were used in this study. Table 10 details the frequencies of traumatic exposure and is stratified according to gender. During assessments at Spirasi clients were asked if they had experienced any of the following traumatic events: (1) deprivation of liberty, (2) combat situation, (3) living in hiding, (4) physical violence by authorities or armed groups, (5) experienced torture, (6) experienced sexual assault, rape, (7) experienced solitary confinement, isolation, (8) been in danger of losing life, (9) witnessed torture, (10) witnessed killing, (11) violent death of relatives, (12) disappeared relatives, (13) forcedly separated from relatives.

The most frequently endorsed trauma item by both males and females was having been in danger of losing one's life. 67.7% (*n* = 90) of the total sample (*n* = 133) reported positively when asked if they had experienced this type of trauma. Physical violence by authorities or armed groups was endorsed by 53.4% (*n* = 71) of participants. Both deprivation of liberty and witnessing torture were reported by 51.1% (*n* = 68) of males and females assessed. A lower percentage had reported directly experiencing torture (48.1%, *n* = 64). This was only marginally lower than the percentage of participants who said they had been living in hiding (46.6%, *n* = 62). 42.9% (*n* = 57) had witnessed killing. 38.6% (*n* = 49) had experienced the violent death of relatives. While 34.6% (*n* = 46) had relatives who had disappeared and 24.1% (*n* = 32) had been forcedly separated from their families. 24.8% (*n* = 33) of the sample reported being raped or sexually assaulted. While the least endorsed item overall was exposure to combat situations (18.8%, *n* = 25).

Statistical significance was reported where p <0.05. The difference between genders for deprivation of liberty was not found to be statistically significant ($x^2(1) = 0.318$, p 0.573,). Similarly, living in hiding ($x^2(1) = 1.333$, p 0.248), experience of torture ($x^2(1) = 0.000$, p 0.994), experience of solitary confinement or isolation ($x^2(1) = 0.720$, $p = 0.396$), and witnessing killing ($x^2(1) = 2.368$, $p = 0.124$) showed no significant statistical difference between males and females. Additionally, differences between males and females across all 3 items pertaining to family related trauma, either due to violent death of relatives ($x^2(1) = 0.182$, p 0.670), disappearance of relatives ($x^2(1) = 2.250$, p 0.134), or forced separation from relatives ($x^2(1) = 2.103$, p 0.147), were not found to be statistically significant.

Four out of the 13 items showed statistically significant differences when stratified according to gender. The most substantial difference across genders was reported in relation to instances of sexual violence and rape ($x^2(1) = 29.037$, p <0.001). 8.6% ($n = 7$) of males had experienced sexual assault or rape compared with 50% ($n = 26$) of the females sampled. Similarly, males and females endorsed exposure to combat situations at differing rates that were shown to be statistically significant ($x^2(1) = 5.649$, p 0.017) when analysed according to gender. 28.8% ($n = 15$) of females had been exposed to combat situations. While, by comparison, 12.3% ($n = 10$) males reported experiences of combat situations.

Physical violence by authorities or armed groups was also statistically significant ($x^2(1) = 9.736$, p 0.002) when comparing male and female traumatic exposure. This item was higher for males (64.2%, $n = 52$) than females (36.5%, $n = 19$). Similarly, males reported a higher exposure rate to being in danger of losing their lives ($x^2(1) = 5.527$, p 0.019). 75.3% ($n = 61$) of males endorsed this item compared with t55.8% ($n = 29$) of their female counterparts. Difference across genders relating to witnessing torture was also statistically significant ($x^2(1) = 3.944$, p 0.047). A higher proportion of males (35.3%, $n = 47$) had witnessed torture than females (15.8%, $n = 21$).

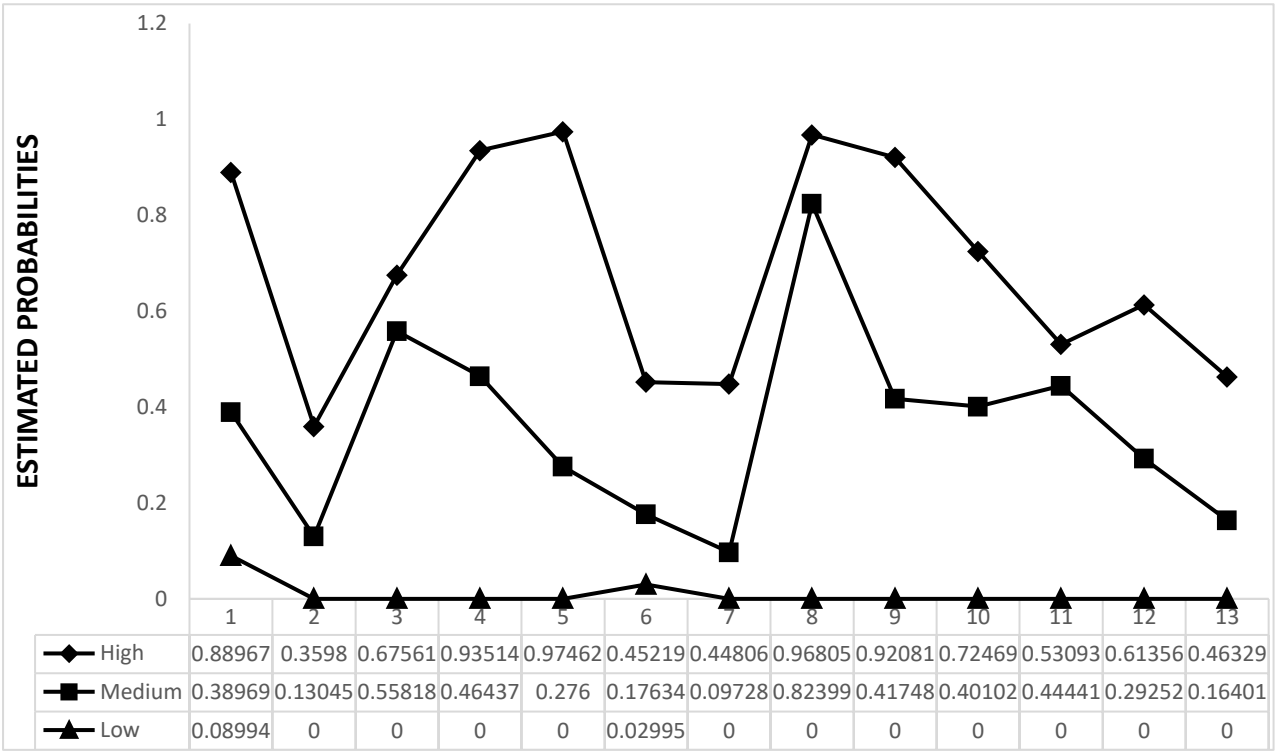
Table 10: Frequencies of exposure to Traumatic Events

Traumatic Exposure		**Endorsement**		**Gender**		$x^2(df)$ *p*
		Count	**(%)**	**Male**	**Female**	
1	Deprivation of liberty	68	51.1	43 (53.1%)	25 (48.1%)	0.318 (1) 0.573
2	Combat situation	25	18.8	10 (12.3%)	15 (28.8%)	5.649 (1) **0.017**
3	Living in hiding	62	46.6	41 (50.6%)	21 (40.4%)	1.333 (1) 0.248
4	Physical violence by authorities or armed groups	71	53.4	52 (64.2%)	19 (36.5%)	9.736 (1) **0.002**
5	Experienced torture	64	48.1	39 (48.1%)	25 (48.1%)	0.000 (1) 0.994
6	Experienced sexual assault, rape	33	24.8	7 (8.6%)	26 (50%)	29.037 (1) **<0.001**
7	Experienced solitary confinement, isolation	28	21.1	19 (23.5%)	9 (17.3%)	0.720 (1) 0.396
8	Been in danger of losing life	90	67.7	61 (75.3%)	29 (55.8%)	5.527 (1) **0.019**
9	Witnessed torture	68	51.1	47 (35.3%)	21 (15.8%)	3.944 (1) **0.047**
10	Witnessed killing	57	42.9	39 (48.1%)	18 (34.6%)	2.368 (1) 0.124
11	Violent death of relatives	49	36.8	31 (38.3%)	18 (34.6%)	0.182 (1) 0.670
12	Disappeared relatives	46	34.6	24 (29.6%)	22 (42.3%)	2.250 (1) 0.134
13	Forcedly separated from relatives	32	24.1	16 (19.8%)	16 (30.8%)	2.103 (1) 0.147

Table 11: Fit indices for Latent Class Analysis of trauma exposure items

Model	Log likelihood	AIC	BIC	ssaBIC	LRT *p*	Entropy
1 class	- 1088.618	2203.235	2240.810	2199.689	-	-
2 class	- 1.0058	1826.109	1904.148	1818.744	399.294 0.000	0.994
3 class	**- 1.5624**	**1745.098**	**1863.602**	**1733.914**	**107.442** **0.6953**	**.0.900**
4 class	- 1.0310	1709.457	1868.426	1694.454	62.725 0.0087	0.923
5 class	- 1.0226	1698.328	1897.762	1679.507	38.565 0.1098	0.936
6 Class	- 1.0277	1703.663	1943.562	1681.022	22.339 0.2954	0.947

Figure 2: Latent Class Analysis profile plot of traumatic exposure items



	1	2	3	4	5	6	7	8	9	10	11	12	13
High	0.88967	0.3598	0.67561	0.93514	0.97462	0.45219	0.44806	0.96805	0.92081	0.72469	0.53093	0.61356	0.46329
Medium	0.38969	0.13045	0.55818	0.46437	0.276	0.17634	0.09728	0.82399	0.41748	0.40102	0.44441	0.29252	0.16401
Low	0.08994	0	0	0	0	0.02995	0	0	0	0	0	0	0

The fit statistics for the LCA are set out in Table 11. The goodness-of-fit indices or information criterion for the 3-class solution indicate that this is the best model fit for the data. The BIC is lowest for this model. In LCA, BIC is the best indicator of model fit as it penalises model complexity (Nylund et al., 2007). The AIC and ssaBIC continue to decrease from 1 through to 6 classes, but the relative magnitude of the decrease is smaller from 4 through to 6 classes. On the basis of this, the 3-class model showed the best fit.

Figure 2 shows the probabilities of traumatic events associated with each class. Class 1 consisted of individuals who had high probabilities of having endorsed each of the thirteen trauma items. It contained the largest number of participants (n = 53, 39.9%,) compared with classes 2 and 3. The highest endorsed item in class 1 was experiencing torture. The estimated probability of endorsement for this item in this class was 97.5%. The lowest endorsed trauma item in class 1 was exposure to combat situations with an estimated probability of endorsement of 36%. This class was labelled 'high risk'. There were n = 47 (35.3%) participants included in class 2. It was labelled 'medium risk' and represented individuals who showed a lower probability of endorsing each trauma item when compared with the 'high risk' class.

The highest endorsed item of class 2 was having been in danger of losing life. The estimated probability of endorsement for this item in this sub-group was 82.4%. While the least reported trauma was experiencing solitary confinement or isolation with a probable endorsement rate of 9.7%. Class 3 labelled 'low risk', showed the lowest probability for endorsing each of the trauma items. It contained the smallest number of participants (n = 33, 24.8%) across each of the three classes. This group endorsed only two out of a potential thirteen items. Participants in this class were characterised by deprivation of liberty and sexual assault or rape. The estimated probability of endorsement for deprivation of liberty was 9%. While the probable rate of endorsement for sexual assault or rape was 3%.

Discussion

The aim of this chapter was to identify frequencies of exposure to traumatic events and latent classes of polyvictimised asylum seekers and refugees from an administrative dataset of n = 133 asylum seekers and refugees accessing rehabilitation services in Spirasi. The highest endorsed trauma item in the overall sample was having been in danger of losing one's life. This finding also remained true when stratified according to gender and was shown to be statistically significant. The lowest endorsed trauma item overall was having been exposed to a combat situation. However, this finding was not replicated when stratified according to gender and was shown to be statistically significant.

The differences across genders for 5 out of the 13 trauma items were found to be statistically significant. The item relating sexual assault or rape demonstrated the lowest *p*-value. This finding replicates previous research on gender difference relating to sexual violence perpetrated against asylum seekers and refugees pre-, peri-, and post-migration (Hynes & Cordozo, 2000; Kelly et al., 2011; Keygnaert et al., 2012; Falb et al., 2013; Freedman et al., 2016).

The LCA was employed to identify sub-groups of trauma exposed asylum seekers and refugees. It sought to identify instances of co-occurrence of traumatic exposure among these populations. Results indicates that traumatic exposure may be explained by three homogenous, polyvictimised latent classes. The 3-class model was found to be the best fit for the data based on the information criterion. These sub-groups were labelled 'high risk', 'medium risk' and 'low risk'. The largest proportion of participants (n = 53, 39.9%,) were found in the 'high risk' category. This finding was consistent with extant research which indicates that asylum seekers and refugees are, more often than not, exposed to multiple traumas.

The estimated probabilities of endorsement for each of the items decreased steadily

from Classes 1 through 3. Out of a possible 13 items, only two were included across each of the three classes. These were deprivation of liberty and sexual assault or rape. The estimated probabilities of endorsement for deprivation of liberty were 89% (Class 1), 39% (Class 2), and 9% (Class 3). While the probabilities of endorsement for sexual assault or rape were 45% (Class 1), 17.6% (Class 2), and 3% (Class 3).

Conclusion

In this chapter a Latent Class Analysis (LCA) was conducted using administrative data gathered from n = 133 service users files at Spirasi. It was predicted that a number of latent trauma classes could be identified from the data and that these classes, in turn, could be assigned 'low', 'medium', and 'high' risk labels. Accordingly, it was hypothesised that the LCA could identify subgroups of polyvictimised asylum seekers and refugees from the data. This model was based on Spirasi's Therapy Needs Assessment which is mentioned in Chapter 6.

Chapter Eight: Predictors of Trauma Exposure

Introduction

In the previous chapter latent classes of polyvictimised asylum seekers and refugees were identified. These were categorised as 'low', 'medium', and 'high' risk subgroups. Chapter 8 aims to identify the predictors of class membership for each of the three latent classes. This chapter reviewed extant research on the predictors of traumatic exposure in the literature and assess how common, and stress related, mental health disorders differ across the three classes of polyvictimised asylum seekers and refugees.

Gender and Traumatic Exposure

Previous studies examining gender differences in traumatic exposure and PTSD prevalence rates have reported some variances between males and females and the respective trauma types that these two genders are exposed to (Chung & Breslau, 2008; Tolin & Foa, 2006; Frans et al., 2005; Stein et al, 2000). In a study of trauma exposure and post-traumatic stress disorder in the general population (n = 1,824), Frans et al. (2005) reported higher prevalence rates for males relating to 4 out of a potential 6 trauma types which they investigated. Males were more likely to experience robbery (14.8%, n = 128), physical assault (59.2%, n = 511), war (8.3%, n = 72), and traffic accidents (68.3%, n = 589) in comparison to females. Females reported an endorsement rate for exposure to tragic deaths 0.1% higher than that of males, which was nonsignificant. However, there was a marked difference in exposure to sexual assault between them. This was the only trauma item where females (10%, n = 96) reported higher prevalence rates than males (1.2%, n = 10).

Looking at frequencies of exposure to specific types of trauma in male and female refugees, Haldane and Nickerson (2016) reported similar findings. Their study included 16 trauma types, divided into two categories, 'non-interpersonal trauma' and 'interpersonal trauma'. Again, males consistently reported an increased exposure to 13 out of 16 trauma items: lack of food water (80.3%, *n* = 49), ill-health/no access to medical care (77%, *n* = 47), lack of shelter (72.1%, *n* = 44), forced isolation from other (42.6%, *n* = 26), being close to death (83.6%, *n* = 51), forced separation from family (57.4%, *n* = 35), lost or kidnapped (31.1%, *n* = 19), imprisonment (68.9%, *n* = 42), serious injury (83.6%, *n* = 51), combat situation (63.9%, *n* = 39), murder of family or friend (36.9%, *n* = 39), murder of stranger or strangers (73.8%, *n* = 45), torture (49.2%, *n* = 30). Consistent with previous studies, a higher proportion of females than males were exposed to rape or sexual abuse (20.0%, *n* = 6). This was true also in terms of exposure to unnatural death of family or friend (63.3%, *n* = 19) and brainwashing (40%, *n* = 12). Of the 16 trauma items, the largest gender difference was reported in regard to exposure to murder of a stranger or strangers.

In a study of traumatic events, migration characteristics and psychiatric symptoms among Somali refugees (*n* = 180), Bhui et al. (2002) found significant gender differences in relation to 12 out of a possible 17 pre-migratory trauma items. Males represented the highest percentages for 10 of the 12 statistically significant variables. These were being in a combat situation (91.1%), murder (80%), feeling close to death (72.2%), shortage of food (70%), enforced isolation (64%), torture (41.1%), suffered serious injury (35.6%), imprisonment (34.4%), shortage of water (27.8%), and being brainwashed (6.98%). Males, however, did not endorse the 2 remaining statistically significant items relating to sexual assault. Only females reported experiences of rape (2.3%) and sexual violation (1.1%).

Schubert and Punamäki (2011) reported similar findings relating to sexually based traumatic exposure. In their study of mental health among torture survivors (*n* = 78), 69% (*n*

= 20) of females were found to have experienced sexual molestation in comparison to 32.7% (*n* = 16) of males. Additionally, 48.3% (*n* = 14) of females reported being raped, while 6.1% (*n* = 3) of males also endorsed this item. The most significant difference between the genders related to this single item. Overall, however, males tended to report higher prevalence rates than their female counterparts for 6 out of the 11 total trauma items. The highest endorsed item for both males (100%, *n* = 49) and females (96.6%, *n* = 34) was exposure to life threats and terrorizing. Additionally, males (98%, *n* = 48) and females (93.1%, *n* = 27) reported other stressful events as their second-most prevalent traumatic exposure. 82.8% (*n* = 24) of females and 63.3% (*n* = 31) of males said they had witnessed atrocities enacted against others. A similar percentage of males (69%, *n* = 34) and females (69%, *n* = 20) had witnessed injury/killing.

An increased proportion of males (83.7%, *n* = 41) compared with females (58.6%, *n* = 17) reported exposure to attack or injury. 20.4% of males (*n* = 10) and 34.5% females (*n* = 10) were exposed to a life-threatening accident. The greatest statistically significant difference between the genders related to exposure to combat; males (49%, *n* = 24) showed a much higher rate of endorsement than females (10.3%, *n* = 3). Once again, a higher proportion of males (22.4%, *n* = 11) had been exposed to natural disasters relative to that of their female (10.3%, *n* = 3) counterparts. Long imprisonment or detention (greater than 12 months) also showed the same prevalence rate among females (10.3%, *n* = 3); the proportion of males affected was, however, increased (32.7%, *n* = 16).

Age and Traumatic Exposure

Briere et al. (2008) conducted a study of female university students (*n* = 2,453), examining the relationship between accumulated exposure to different types of traumatic

events (cumulative trauma) in childhood and the total number of different types of symptomatology reported (symptom complexity) in adulthood. They found 12 types of traumatic exposure to be common among this sample. Sexual trauma was among the highest reported traumatic experiences among this sample. The most frequently endorsed interpersonal trauma in childhood was physical abuse (15%, *n* = 369). Findings relating to forced, traumatic sexual contact were consistent with existing reported rates among female populations. Sexual contact during childhood was experienced by 14.7% (*n* = 366). Rape was reported by 8.3% (*n* = 203) of women.

Additionally, a similar proportion had been subjected to attempted rapes (8.1%, *n* = 198). The remaining traumatic events were non-sexual experiences. Physical assault (other than physical abuse) was reported at a rate of 13.1% (*n* = 321). 12.7 % (*n* = 311) of the women surveyed reported witnessing trauma as children. 9.6% (*n* = 236) experienced a life-threatening accident. 9.6% (*n* = 235) had suffered a traumatic bereavement. While 7.0% (*n* = 171) experienced a life-threatening illness. Additionally, 5.2% (*n* = 127) of participants were subjected to threats of violence. Other life-threatening events accounted for 2.6% (*n* = 64) of traumatic exposure. The least reported trauma was mugging or robbery with weapons (2.1%, *n* = 15).

In summary, from the 12 potential trauma types, 44.0% (*n* = 1,079) of the women reported no childhood traumas. 27.6% (*n* = 678) reported one trauma, 15% (*n* = 367) two traumas, 7.5% (*n* = 185) three traumas, 3.3% (*n* = 81) four traumas, 1.3% (*n* = 33) five traumas, 0.9% (*n* = 21) six traumas, and 0.3% (*n* = 9) seven or eight traumas. Overall findings suggested an elevated Trauma Symptom Inventory (TSI: Breire et al., 1995) score in adulthood linked with childhood trauma type.

The TSI is a 100-item test of the impact of traumatic events. It has 10 clinical scales: anxious arousal, depression, anger-irritability, intrusive experiences, defensive avoidance, dissociation, sexual concerns, dysfunctional sexual behaviour, impaired self-reference, and tension reduction behaviour. A post-hoc polynomial analysis revealed a linear relationship between TSI scores and cumulative trauma. Additionally, multiple regression analysis indicated child rape and child physical abuse as predictors of symptom complexity, these were among the most unique predictors, followed by mugging or robbery with a weapon, attempted rape, and other childhood sexual contact, $R = .32$, $F\ (13, 2439) = 22.00$, $p < .001$.

In a more recent study conducted by Dunn et al. (2017), the developmental timing of trauma exposure and elevated risk for psychological morbidity in later life was investigated. In this qualitative study, socio-demographic data, lifetime trauma exposure and current psychiatric symptoms were gathered from African-American patients (n = 1,944), aged between 18 and 90 years, in a hospital outpatient setting in the United States of America. A large proportion of participants (94.9%) reported having been exposed to at least one trauma. 84.3% had been exposed to two or more events. Non-interpersonal traumas were the most frequently endorsed type, which occurred more often during adulthood. Co-occurrence was shown to be more probable in cases where one's first traumatic experience took place during their formative years.

However, Dunn et al. (2017) found that, regardless of age of trauma exposure, all of those who had reported a traumatic experience had elevated scores when assessed for emotional dysregulation using the Emotional Dysregulation Scale (Powers et al., 2015). Experiences of childhood maltreatment (violence between caregivers, physical abuse, emotional abuse, sexual abuse), interpersonal violence (family/friend murdered, witness attack of family/friend, witness attack of stranger), as well as non-interpersonal trauma

(natural disaster, serious accident or injury, life threatening illness), were positively associated with elevated levels of emotional dysregulation in adulthood.

The most significant effect in adulthood related to childhood maltreatment. Participants who reported experiences of childhood maltreatment scored 9.94 points higher than non-exposed participants on the emotional dysregulation scale. Additionally, it was found, in particular, that those who experienced maltreatment during early (β = 11.868, 95% CI = 9.08, 14.65) or middle (β = 10.543, 95% CI = 8.30, 12.79) childhood years showed increased levels of emotional dysregulation when compared to those who reported maltreatment during their teenage years (β = 6.389, 95% CI = 3.43, 9.35).

Although non-interpersonal trauma types were more frequently experienced than any other, non-interpersonal traumas were only associated with higher levels of emotional dysregulation when such traumas occurred during middle childhood. The effect of exposure in middle childhood was significantly elevated when compared with the effects in adolescence and adulthood. Overall, the effect of traumatic exposure was shown to be an interactive function of trauma type and time of first traumatic occurrence.

Family Status, Social Support Network and Traumatic Exposure

In their study examining the influence of pre-traumatic family variables on the development of PTSD, Jovanovic et al. (2004) analysed data pertaining to a sample of *n* = 120 individuals who were victims of civil, religious and national conflicts in former Yugoslavia throughout the 1990s. Participants were divided into two groups: PTSD target group (*n* = 60) and non-PTSD comparison group (*n* = 60). 17% (*n* = 10) of the target group were self-identified refugees. While only 7% (*n* = 4) of the comparison group were refugees. The Family Hardiness Index (FHI) was used to assess family resilience and adaptiveness to

stress with a view to ascertaining the effect of pre-existing familial support on later PTSD outcomes; Social Support Index (SSI) measured the extent of integration into social networks and the sense of support (emotional and practical) and affirmation derived from these social networks; and the Family Inventory of Life Events and Changes (FILE) was administered to assess difficult life events perceived as indicators of stressors within the family unit in the preceding year.

Using these instruments, Jovanovic et al. (2004) found that the target group, composed of PTSD sufferers, showed elevated scores for the FILE, indicating both weak family adaptative resources and social support networks. Additionally, pre-existing familial mental health problems were prevalent within the target group. This group also contained the largest proportion (55%, $n = 45$) of married participants. Jovanovic et al. (2004) conducted a logistic regression analysis which showed that along with decreased family hardiness, weak support within social networks, being married was indicated as a risk factor for decreased recovery in those exposed to traumatic events.

Additional studies (Kern et al., 2019) have attested to the relation between interpersonal difficulties and PTSD symptomology. In 2019, Kern et al. published a study pertaining to the role of social acknowledgment and trauma type in $n = 137$ survivors of both assaultive and non-assaultive trauma. The assaultive component consisted of four trauma types: sexual assault ($n = 49$), physical assault ($n = 20$), threatened assault ($n = 10$), and combat ($n = 4$). Non-assaultive traumas were categorised as: transportation accidents ($n = 34$), witnessing death ($n = 10$), other serious accidents ($n = 6$), fire/explosion ($n = 3$), and illness ($n = 1$).

While those who experienced assaultive trauma evidenced elevated levels of PTSD, community disapproval and social impairment than those experiencing non-assaultive events,

in cases of non-assaultive trauma, social disapproval/rejection (the degree to which survivors feel invalidated or isolated in the larger community) was a more relevant factor for interpersonal functioning. Simple slope analysis evidenced a greater association between symptom severity and social disapproval/rejection in victims of non-assaultive traumas.

Historically, studies focusing on the epidemiology of PTSD (Creamer et al., 2001) have pointed to an elevated level of mental health difficulties where social support networks and family status have been found wanting or absent. Creamer et al. (2001) assessed the prevalence of PTSD in an Australian community sample taken from the Australian National Survey of Mental Health and Well-being and found that family status and concurrent social supports were important predictors of PTSD. In a sample of *n* =10,641, marital or family status was indicated as a risk factor for PTSD. Previously married, as opposed to currently married, individuals had higher endorsement rates of traumatic exposure. Previously married and never married participants also reported a higher prevalence rate of PTSD symptomology in comparison to their currently married counterparts.

Four models were used to assess participants' exposure to trauma and PTSD prevalence. Both the previously married and never married groups were, overall, more likely to meet the criteria for PTSD diagnosis. This finding was consistent when controlling for other variables across each of the trauma types reported. Participants were asked if they had experienced one or more of 10 trauma types during their lifetime. These included: rape *(n* = 18), molestation *(n* = 59), physical attack *(n* = 196), combat *(n* = 140), shock *(n* = 263), life-threatening accident *(n* = 657), natural disaster (*n* = 310), witnessing trauma *(n* = 991), threat with a weapon *(n* = 262), other *(n* = 262).

Model 1 focussed on trauma exposure over participants' lifetimes; along with gender and age, marital or family status, specifically having been previously married, was a

significant predictor of trauma exposure. This finding was noted as the second most significant risk variable. Model 2 assessed the risk of a 12-month PTSD diagnosis. This model indicated two significant findings relating to age and marital status. As with the previous study, being previously married (OR 2-91 (1-7–5-1) was a significant risk for PTSD diagnosis. Both models 3 and 4 related to PTSD in those participants who had been exposed to at least one trauma. Additionally, model 4 controlled for trauma type to assess the effects on PTSD risk. According to both models, younger participants (<55 years) and those who were previously married were more likely to be diagnosed with PTSD. These findings were consistent with data from the National Comorbidity Survey.

The Relationship between Trauma Type, PTSD, and C-PTSD

While trauma is a pre-requisite for diagnosis of PTSD and C-PTSD, studies show that the type of trauma that a person experiences can have a strong bearing on symptom presentation and the severity of same. In a study conducted by Hyland et al. (2017), data from n = 2,980 participants who partook in a Danish birth cohort survey between 2008-2009 was used to investigate the role of trauma type in predicting ICD-11 PTSD and C-PTSD symptoms. Participants presented with at least one of eight types of trauma. These included, death of a close family member (71%, n = 1,839), road traffic accidents (10.6%, n = 275), near-drowning (7.2%, n = 187), robbery (8.8%, n = 228), physical assault as an adult (16.8%, n = 436), childhood physical assault (48.7%, n = 1,263), childhood bullying (44.4%, n = 1,150), and childhood sexual abuse (2.5%, n = 66).

They found that sex/gender was a significant predictor of PTSD above trauma type. Females were shown to be twice as likely as males to meet the criteria for PTSD diagnosis, consistent with other studies (Christiansen & Hansen, 2015). Hyland et al. (2017) reported

childhood sexual abuse as the strongest predictor of C-PTSD within their sample. Additionally, suffering physical abuse during childhood and adulthood increased the risk of meeting ICD-11 C-PTSD criteria. Cumulative exposure to childhood trauma, in particular, was linked to elevated risk of C-PTSD but less so for PTSD. This finding suggests that symptoms related to disturbances in self-organisation (DSO) are peculiar to specific trauma types (Hyland et al., 2017).

Shakespeare-Finch and Armstrong (2010) posited similar findings in their study of trauma types and post-trauma outcomes. Their study investigated differences in outcomes between survivors of sexual assault, bereaved individuals, and victims of road traffic accidents. Participants across all three trauma types reported mean scores for the Impact of Events Scale-Revised which indicated symptom levels for PTSD within a range for clinical diagnosis. However, consistent with similar studies, participants who had experienced sexual assault reported the highest mean score across all three types (Frans et al., 2005; Hapke et al., 2006). Literature suggests that C-PTSD is more significantly linked to multiple, sustained, and prolonged traumas than one-time occurrences (Cloitre et al., 2014; Cloitre et al. 2013).

The Relationship between Trauma Type, Depression, and Anxiety

Typically, mental health outcomes in the wake of traumatic exposure are theorised within the context of PTSD and indeed C-PTSD. The literature generally points to these mental health disorders as more likely mental health outcomes for traumatised individuals in comparison to other mental health problems. However, research indicates that depression and anxiety are as likely, if not more likely, to occur in trauma exposed populations. McQuaid et al. (2001) conducted a study of reported trauma, post-traumatic stress disorder and major depression among primary care patients and found that participants (n = 132) did not meet the

threshold for diagnosis of PTSD or comparable psychological illnesses. Those who had reported trauma were more inclined to display symptoms consistent with current Major Depressive Disorder (MDD, 27.8%). In their sample, 68.2% (*n* = 90) said they had experienced at least one trauma over their lifespan; 51.1% (*n* = 67) reported having endured more than one traumatic incident.

Assaultive trauma was perceived as the most distressing type of trauma for those who were symptomatic of MDD. This was also true in relation to those who had life-time full or partial PTSD. Participants who reported assaultive trauma as their most distressing type of trauma exposure also were more likely to have experienced increased numbers of trauma in comparison to other participants. Overall, trauma exposure was a significant predictor of MDD and less so of PTSD. However, factors such as type and frequency of trauma were seen to mediate the link between trauma and PTSD and MDD (McQuaid, 2001).

Indeed, epidemiological studies corroborate a pre-existing link between PTSD and other psychological disorders, including anxiety and depression (Breslau et al.,1991; Kessler et al., 1995). Breslau et al. (2009) found that such instances of comorbidity may be explicable owing to several factors. One theory is that pre-existing psychiatric disorders elevate an individual's risk for developing PTSD by increasing an individual's vulnerability to traumatic events. Studies have also suggested that MDD increases the risk for traumatic exposure (Breslau et al., 1997). Furthermore, it has been suggested that PTSD may be a causal factor in developing MDD, anxiety and other psychiatric disorders owing to factors such as self-medication and other inappropriate coping mechanisms (Breslau, 2009).

In studies pertaining to childhood trauma, PTSD and depression, research indicates that this particular category of trauma frequently leads to increased diagnosis in both PTSD and depression, in comparison to other mental health outcomes (Bedard-Gilligan et al., 2015;

Cloitre et al., 2005; Cloitre et al., 2002; Paolucci, 2001). Studies have indicated that between 51% and 87% of people with PTSD also display symptoms consistent with MDD (Rytwinski et al., 2013). Similarly, much research investigating trauma type and anxiety disorders tends to be theorised in the context of childhood trauma, indicating a significant association between these variables (Hovens et al., 2010). Data from *n* = 1,931 adults in the Netherlands study of Depression and Anxiety found that childhood trauma (emotional neglect, psychological, physical and sexual abuse) was associated with psychopathology, particularly anxiety and depression (Hovens et al., 2010).

The Relationship between Trauma Type and Somatoform Disorders

Extant research reports an elaborate association between mental health difficulties, most notably PTSD, and the somatic expression of such disorders. Throughout existing literature it is commonplace that PTSD is linked to 'ill-defined' or 'medically unexplained' somatic complaints as well as diagnosable bodily disorders (McFarlane, 1994; Gupta, 2013) Indeed, several studies (Otis et al., 2003; Vilano et al., 2007; Norman et al., 2008) indicate that chronic pain has been reported by up to 80% of PTSD patients. This association is particularly true in relation to refugee populations (Teodorescu et al., 2015). In 2018, Morina et al. conducted a study of *n = 134* asylum seeker and refugees who had been exposed to war and torture related backgrounds and were receiving psychological treatment in an outpatient setting in Switzerland.

Participants were evaluated in relation to somatic complaints using the somatisation subscale of The Symptom Checklist (SCL: Derogatis, 1992). The subscale assessed participants relating to 12 somatic indicators: soreness of muscles, numbness or tingling in part of the body, pains in lower back, heavy feelings in arms or legs, feeling weak in parts of

body, trouble getting breath, pains in heart or chest, faintness or dizziness, headaches, nausea or upset stomach, lump in throat, hot or cold spells. Morina et al. (2018) carried out an exploratory factor analysis of the 12-item subscale and found two factors of somatic complaints. Factor 1 was labelled 'weakness' in relation to perceived bodily dysfunction and factor 2 was labelled 'arousal' relating to 'sympathetic hyperactivation'. Both factors 1 and 2 were found to be significantly correlated with each of the PTSD symptom clusters. The strongest correlations were found with criterion D (negative alterations in cognitions and mood) and E (alterations in arousal and reactivity). Their findings indicate a marked difference in manifestations of somatic complaints relative to the different clusters of PTSD symptoms one experiences.

A common plethora of somatic complaints reported by trauma survivors who, more often than not, have been diagnosed with PTSD include: sleep disturbance, dysfunction of the nervous system and sensory organs, cardiovascular problems, respiratory difficulties, endocrine and immune system impairments, musculoskeletal disorders, genitourinary complaints (Gupta, 2013). Sleep disturbance is one of the most common somatic symptoms experienced by trauma survivors (Mellman & Maroof, 2010). Gupta and Chen (2006) conducted a study using epidemiological data gathered from outpatient visits to physicians and hospitals owing to complaints of recurrent nightmares. They found that 31.8% ± 11.9% of patients presenting with this complaint were suffering from PTSD. Additional research has indicated that those presenting with similar patterns of sleep disturbance but who do not display underlying PTSD symptomology are lesser in number (Mellman & Maroof, 2010; Ohayon & Shapiro, 2010).

Several types of sleep disturbances have been reported in the literature on PTSD related somatoform disorders. When comparing clinical and non-clinical samples of individuals suffering with sleep-related breathing disorders, several studies found elevated

experiences of these disorders in PTSD sufferers even when stratified according to gender (Gold, 2011; Maher et al., 2006; Webber et al., 2011). It has also been reported that individuals who present with sleep-related breathing disorders frequently report instances of insomnia which, as Krakow et al. (2002) report, is linked to 'sympathetic activation' (see also Morina et al., 2018).

Additionally, instances of sleep-related movement disorders are more prevalent among those with a PTSD diagnosis (Maher et al., 2006). Such disorders include restless leg syndrome and periodic limb movement disorder. Subjects who experience such disturbances also tend to report excessive tiredness even after perceived successful sleep. In other cases, individuals have reported REM sleep disturbance behaviour disorders and sleep paralysis, although research in this area is limited. However, in a study conducted by Husain et al. (2001), they reported that veterans suffering with PTSD and other psychiatric ailments exhibited more symptoms associated with sleep disturbance behaviour disorders than veterans who did not report current psychiatric symptoms. In cases of sleep paralysis, studies suggest that prevalence rates are higher for those who meet the threshold for diagnosis of PTSD as opposed to mood disorders such as depression (Gupta, 2012).

Research has shown that somatoform disorders extend beyond sleep disturbances in a significant proportion of trauma exposed individuals. General hospital admission studies indicate that psychogenic symptoms account for 5% of neurology admissions (Allet & Allet, 2006). A review of the literature reports that psychogenic nonepileptic seizures is one of the most commonly reported nervous system disorders related to trauma exposure (Fiszman et al., 2004; Paras et al., 2009; Gupta, 2013). Non epileptic seizures show an increased association with dissociative disorders, general trauma (44% – 100%), physical and/or sexual abuse (23% - 27%), and PTSD (Fiszman et al., 2004; Paras et al., 2009).

Many of the sense organ disorders, cardiovascular and respiratory problems, and immune system deficiencies which are prevalent among the general population also show a marked increase in subjects reporting a history of trauma. Tinnitus, visual disturbances, dizziness, and non-dermatomal somatosensory deficits account for many of these complaints (Mailis-Gagnon & Nicholson, 2011; Fagelson, 2007; Trachtman, 2010; Staab, 2006). Furthermore, a purportedly close relation between PTSD and significant cardiovascular responses to trauma triggers is well documented; and such reactivity is known to increase the risk of high blood pressure and associated cardiovascular disturbances including heart disease (Player & Peterson, 2011; McFarlane, 2010; Wittstein et al., 2005).

Additionally, a strong association between respiratory problems and trauma, specifically those experienced during childhood, has been demonstrated elsewhere (Goodwin & Stein, 2004). In a sample of children presenting with asthma related symptoms, 25% met the threshold for diagnosis of PTSD. Similarly, endocrine, metabolic and immune impairments, such as diabetes, overweight, and obesity have been associated with PTSD symptomology (Boscarino, 2004; Perkonigg et al., 2009).

Rates of general and chronic musculoskeletal pain such as fibromyalgia and lower back pain are reportedly significant in those presenting with trauma histories, particularly those who have experienced sexual violations, such as rape (Paras et al., 2009). Similarly, many studies have shown that sexual abuse, specifically rape, and PTSD are associated with gastrointestinal disturbances including irritable bowel syndrome and liver deficiencies (von Känel et al., 2010; Paras et al., 2009; Savas et al., 2008; Kimerling et al., 2007; Ross, 2005). Additionally, genitourinary disturbances have also been linked to sexual trauma and PTSD; these include complaints such as pelvic pain and interstitial cystitis (Meltzer-Brody et al., 2007; Goldstein et al., 2008; Paras et al., 2009).

Predictors of Trauma Class Membership

On the basis of the reviewed literature, it was predicted that: (1) demographic variables (age, gender, number of children home/Republic of Ireland, and marital status) would be significant predictors of trauma class membership, (2) the level of common mental health disorders (anxiety, depression, and somatisation) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure, and (3) the level of trauma related health disorders (PTSD and DSO) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure.

Multinomial Logistic Regression

Figure 3: Latent trauma classes with predictors of distal outcomes

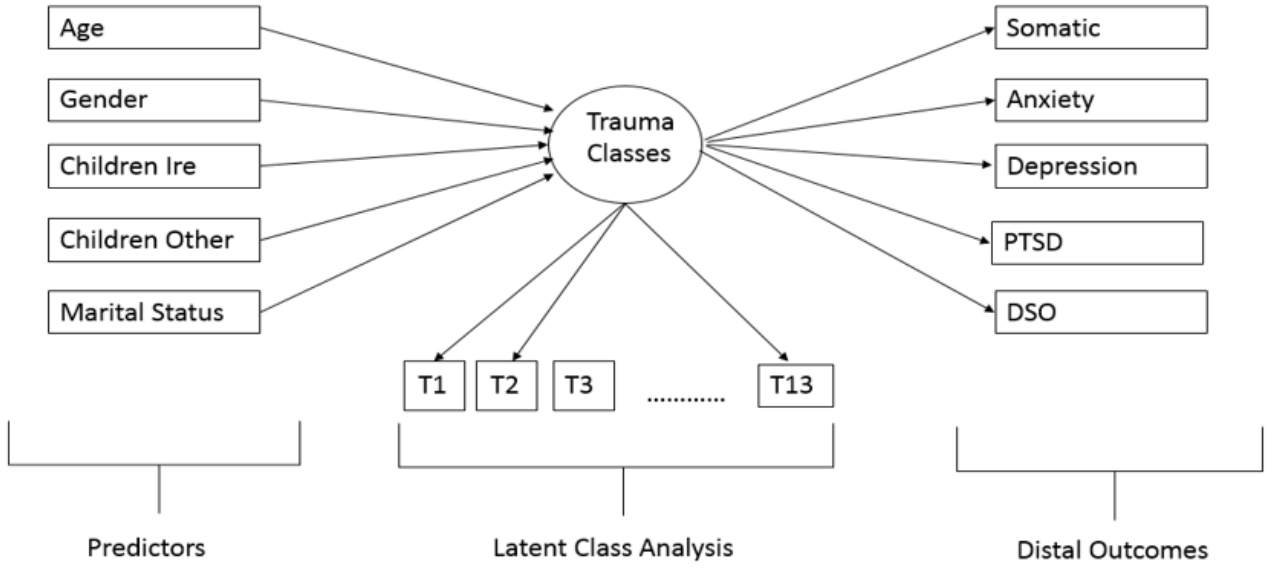


Figure 3 models the 3 latent classes identified in Chapter 7 with predictors and distal outcomes. There were five hypothesised predictors of trauma class membership: age, gender,

the number of children in the Republic of Ireland, number of children abroad, and marital/family status. Distal outcomes in relation to the three-class trauma model included somatic complaints, anxiety, depression, PTSD, and disturbances in self-organisation (C-PTSD). The main analyses were conducted using Mplus (Muthén & Muthén, 2017).

Table 12 sets out the odds ratios for predictors of trauma class membership of the 3-class model. There were no statistically significant differences found across classes in terms of variables such as gender, number of children in the Republic of Ireland, number of children abroad, or marital status. However, a statistically significant affect was identified in relation to the age variable, specifically for class 2, medium risk category. For every unit increase in age, one's probability of belonging to the medium risk category decreased.

Table 13 contains the probabilities for diagnoses of PTSD, DSO (C-PTSD), depression and anxiety across all three classes. The probability for PTSD diagnosis for class 1 was 23.1%, 10% according to class 2, and 18.2% for class 3. Probabilities were elevated across all three classes. However, there were no significant differences found between each of these. The probability rate for disturbances in self-organisation was highest for class 1, the high-risk category. There was no significant difference found in probability rates across each of the three classes. There were significant differences across each of the three classes found in terms of depression diagnoses. Probability rates for depression were high for classes 1, 2, and 3. The most significant difference was found in class 3. Both classes 1 and 2 indicated similar probabilities for the depression variable. However, these probability rates were significantly lower in comparison to class 3. Conversely, for the anxiety variable probabilities were almost identical regardless of class membership.

Table 12: Predictors of trauma class membership

Predictor	**Class 1**		**Class 2**	
	OR	**CI**	**OR**	**CI**
Gender (female)	0.649	0.25-1.71	0.385	0.12-1.21
Age	0.975	0.93-1.03	0.934*	0.88-0.99
# Children (Rep. of Ireland)	0.548	0.16-1.83	0.681	0.19-2.44
# Children (Other)	0.831	0.27-2.53	0.976	0.33-2.86
Marital Status (not single)	1.887	0.57-6.24	1.611	0.47-5.51

Note: Class 3 reference category

The somatisation variable showed the greatest significance when compared across the three classes in the analyses, as illustrated in Table 14. Somatic complaints were elevated across each of the classes. This was most prevalent for class 2 and similarly for class 1. The largest difference when comparing classes was observed between classes 1 and 3, and classes 2 and 3. Individuals belonging to classes 1 and 2 indicated a significantly higher mean score relating to somatic indicators than individuals in class 3.

Table 13: Probabilities of diagnostic status of PTSD, DSO, depression, and anxiety across latent classes

		PTSD			DSO			Depression			Anxiety		
		Prob.	**OR**	**CI**	**Prob.**	**OR**	**CI**	**Prob.**	**OR**	**CI**	**Prob.**	**OR**	**CI**
Class 1	No	0.769			0.843			0.348			0.245		
	Yes	0.231	1.344	0.445 - 4.058	0.157	1.853	0.137 - 3.787	0.652	0.186	0.049 - 0.712	0.755	0.990	0.329- 2.983
Class 2	No	0.900			0.933			0.287			0.235		
	Yes	0.100	0.497	0.126 - 1.963	0.067	0.721	0.137 - 3.787	0.713	0.247	0.061- 1.00	0.765	1.045	0.342- 3.192
Class 3	No	0.818			0.909			0.091			0.243		
	Yes	0.182	ref		0.091	ref		0.909	ref		0.757	ref	
Overall test		Wald (*df* =2) = 2.792 *p* 0.248			Wald (*df* = 2) = 1.616 *p* 0.446			Wald (*df* = 2) = 11.003 *p* 0.003			Wald (*df* = 2) = 0.009 *p* 0.996		
Pairwise											***x²***		***p***
											Class 1 vs. 2		0.587
											Class 1 vs. 3		0.003
											Class 2 vs. 3		0.032

Table 14: Differences in somatisation scores across latent classes

	Somatisation	
	Mean	**Standard error**
Class 1	4.259	0.392
Class 2	4.397	0.454
Class 3	1.180	0.466
Overall test	x^2 **(*df* = 2)=** 34.307 ***p*** 0.003	

Comparison	x^2	***p***
Class 1 vs. 2	0.043	0.835
Class 1 vs. 3	25.566	0.000
Class 2 vs. 3	24.238	0.000

Discussion

A review of the literature indicated a number of predictor variables for traumatic exposure and, thus, class membership. Based on these findings, it was predicted that: (1) demographic variables (age, gender, number of children home/Republic of Ireland, and marital status) would be significant predictors of trauma class membership, (2) the level of common mental health disorders (anxiety, depression, and somatisation) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure, and (3) the level of trauma related health disorders (PTSD and DSO) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure.

Existing research was found to substantiate the hypothesis that gender, age, family status and social support networks are among the most salient of these. Gender was shown to be a predictor of trauma frequency and trauma type. Studies indicated that males were more likely to experience trauma than females. Furthermore, males were more likely to experience all types of interpersonal trauma in comparison to their female counterparts. However, females reported significantly higher instances of rape and sexual trauma than males. Multinomial logistic regression indicated that gender was not a significant predictor of class membership in the present study.

Studies have shown that age is an important predictor of trauma frequency, in particular. A large proportion of extant literature points to childhood trauma and traumatic experience at a younger age as salient predictors of vulnerability to frequency and co-occurrence in later life. In the present study, age was shown to be a significant predictor of class 2, medium risk class, membership. For every year's increase in age, the probability of membership for class 2 decreased.

Across the studies cited, family or marital status (being previously married), weak social support network, and social isolation were all found to decrease recovery from traumatic events. Suggesting that interpersonal support is vital to trauma recovery. Indeed, it was shown that social disapproval or rejection were stronger predictors than assaultive trauma for poor interpersonal functioning. However, in the present study family or marital status did not significantly predict class membership.

A review of the literature also suggested a distinct relation between trauma type, PTSD and C-PTSD/DSO symptom presentation. For example, it was found that childhood abuse, particularly sexual abuse, was associated with disturbances in self organisation. While studies pertaining to trauma and PTSD tend to emphasise a marked relation between these

two variables, the present study indicated differing findings. Multinomial logistic regression showed that disturbances in self-organisation and PTSD were the least endorsed mental health outcomes in the sample. Probabilities decreased steadily across each of the 3 classes. Additionally, probabilities for DSO were lower again that those of PTSD.

Anxiety was found to be the most significant mental health outcome for each of the 3 classes. Regardless of class membership, anxiety was prevalent across all cases. Literature indicated that those who reported experiences of assaultive trauma were more likely to manifest symptoms of depression than other disorders. This finding was tentatively indicated in the analyses in this chapter which showed that there were elevated levels of depression across each of the 3 classes. This also indicates a level of co-occurrence between depression and the other disorders investigated in this study.

The most significant finding in Chapter 8 related to somatisation across the 3 latent classes. Mean scores for somatic complaints were elevated across each of the classes. Somatoform disorders were shown to be prevalent in the majority of cases. In particular, classes 1 and 2 had similar mean scores, but these differed significantly from class 3 which indicated the lowest mean of the 3-class solution. It may be surmised that somatic indicators are, therefore, not necessarily culturally specific. Rather, they are consistent indicators across a spectrum of latent classes of polyvictimised individuals.

Conclusion

Chapter 8 reviewed the extant research literature on predictors of trauma exposure and incorporated relevant variables as predictors of the latent class model of trauma exposure, as well as assessing how common, and stress related, mental health disorders differ across the trauma classes. A Multinomial Logistic Regression was conducted and found that somatic

complaints were the most significant findings across all 3 classes. Classes 1 and 2 were almost identical in terms of mean scores but both classes differed significantly from class 3. However, the analysis also found that most demographic variables were not statistically significant predictors of trauma class membership. Indeed, age was the single most statistically significant predictor of class 2 membership. Increase in age decreased the probability of class 2 membership. Gender, marital status, number of children in the Republic of Ireland and abroad, overall family and social support networks were shown to be non-significant predictors of class membership.

Furthermore, probability of mental health outcomes was not found to be statistically significant as the literature suggested. The analysis demonstrated that the probability of having anxiety did not differ significantly in all 3 classes. Each class indicated extremely high levels, but there were no marked differences in classes 1, 2, or 3. This confirmed the findings of previous studies which have shown that anxiety is pervasive among all asylum seeking and refugee populations in Europe.

There were similar indications for probability of depression in classes 1, 2, and 3, which is consistent with findings on the prevalence of depression in forced migrant populations. While the analysis reported non-significant findings in this regard, probability rates for depression across each of the three classes were elevated, as studies consistently report. PTSD and DSO (C-PTSD) were not statistically significant outcomes for any of the three classes. This is an important finding given that prevalence rates of PTSD and DSO (C-PTSD) in asylum-seeking and refugee populations is reportedly high.

Chapter Nine: Assessing Level of Need

Introduction

The previous chapters endeavoured to investigate how psychosocial vulnerability can be adequately understood in relation to trauma exposure and mental health for asylum-seeking and refugee populations. To this end, data from n=133 client files from the care centre for survivors of torture in the Republic of Ireland was extracted, analysed, and extant research explored with a view to presenting new and in-depth information on the client profiles of Spirasi service users. From the outset of this study it was hypothesised that a 3-class model of trauma exposed subgroups existed within the data. This was derived from Spirasi's Therapy Needs Assessment model, which assigns its clients to 'low', 'medium', and 'high' needs categories based on a summative score and expert clinical judgment. Chapter 9 seeks to further contextualise the 3-class model with reference to the original model from which it is derived: The Therapy Needs Assessment Scale.

The Therapy Needs Assessment Scale

The Therapy Needs Assessment scale has been an important component of the IA procedure in Spirasi. Clients are assigned a 'low', 'medium', or 'high' need depending on their score for this measure. It is used to determine how urgent a client's need for psychotherapeutic intervention is presently. As part of the initial assessment the team (psychosocial officer, physician, and psychotherapist) assign a score for the client based on a negative (0) or affirmative (1) response to each of the questions. This is informed by both the client's self-reported trauma history and the clinicians' expert judgments. The assessment scale consists of 10 questions which are simply answered 'yes' or 'no'. Scores are filled in by

the team during the Care Plan phase of the initial assessment. This is the final component of the IA process.

Chapter 6 (Table 7) presented the descriptive statistics for The Therapy Needs Assessment scale which showed that type-two trauma (rape, sexual violence, physical & psychological trauma) was the overall highest (84.3%) endorsed item on the risk assessment scale. Type-two trauma related to scenes of interpersonal violence which, as shown in previous chapters, is a significant risk factor for several mental health disorders, particularly PTSD. Chapters 7 and 8 have shown that these types of trauma are evident across each of the three latent classes in the data. In this chapter it was hypothesised that, as well as the needs assessment questions, age, gender, and trauma class membership would be predictors of the 'low', 'medium', and 'high' needs categories.

Multinomial Logistic Regression

A multinomial logistic regression was conducted using the 'Need for Care' variable as the dependent variable. This had 3 categories, 'low', medium' and 'high', and the 'low' category was used as the reference category. The predictors were age, gender, and the 9 questions used in the therapy assessment that are used to generate the expert judgement of the 'Need for Care' categorisation.

These were scored 'Yes' (1) and 'No' (0). A variable representing trauma class membership (high, medium, low) was included as a predictor, with the 'low' class used as a reference category. Finally, a variable representing PTSD/C-PTSD diagnostic status was included with 'No PTSD/C-PTSD' used as a reference category. The model was statistically significant (x^2 (30) = 97.344, $p < .001$) and the estimates are presented in Table 15.

For the purposes of the analysis the question of ‘did you make a plan’ for suicide was excluded. The therapy assessment checklist items included in the analysis were:

- History of suicidality or self-harm,
- Current suicidal ideation,
- Type 2 Trauma,
- Torture history,
- Depression,
- Failed application for refugee status,
- Physical illness,
- Substance abuse,
- Living outside direct provision

Past and Current Suicidality and Mental Health Scores as Predictors of Therapy Need

Table 15 shows that clients who presented with a history of suicidality or self-harm and depression were more likely to be in the ‘medium’ need category. When compared to the low need group, history of suicidality or self-harm and depression were found to be statistically significant predictors of a medium need. Both PTSD and C-PTSD were not shown to be significant predictors of the medium need category.

Additionally, Table 15 shows that clients who reported a history of suicidality or self-harm, depression, and in addition, current suicidal ideation were more likely to be in the ‘high’ need category. That is, when compared to the low and medium needs categories, history of suicidality or self-harm, depression, and current suicidal ideation were found to be

statistically significant predictors of a high need. Both PTSD and C-PTSD were not shown to be significant predictors of the high need category.

Table 15: Estimates for predictors of need for care

	Need: Medium				Need: High			
Predictor	***p***	**OR**	**95% CI Lower**	**95% CI Upper**	***p***	**OR**	**95% CI Lower**	**95% CI Upper**
Intercept	.047				.001			
Gender	.366	1.858	.485	7.122	.740	1.301	.275	6.158
Age	.847	.993	.922	1.068	.576	1.022	.946	1.104
History of suicidality or self-harm	.003	**15.592**	2.561	94.925	.000	**29.578**	4.418	198.042
Current suicidal ideation	.142	3.096	.685	13.987	.000	**20.331**	3.877	106.614
Type 2 Tauma	.862	.866	.171	4.395	.373	2.546	.325	19.929
Torture history	.057	3.824	.959	15.240	.464	1.859	.353	9.777
Depression	.000	**48.194**	5.492	422.937	.004	**29.691**	2.995	294.305
Failed asylum for refugee status	.391	1.766	.482	6.469	.819	.834	.176	3.960
Physical illness	.565	1.469	.397	5.438	.175	2.865	.626	13.106
Substance abuse	.093	48.254	.525	4433.240	.176	24.488	.238	2521.399
Living outside direct provision	.785	.737	.082	6.602	.659	1.721	.155	19.120
Class: High	.167	.318	.062	1.614	.865	1.182	.171	8.192
Class: Medium	.097	.240	.045	1.292	.191	.266	.037	1.933
Class: Low	.	.	.	.	.	.	.	.
CPTSD	.865	1.230	.113	13.442	.776	.674	.044	10.199
PTSD	.300	.320	.037	2.760	.164	.129	.007	2.306
No PTSD/CPTSD	Ref	.	.	.	Ref	.	.	.

Note: Estimates should be interpreted with a degree of caution given the sample size limitations

Trauma Class Membership as a Predictor of Therapy Need

The previous chapter posited a three-class model of trauma exposed clients. It examined the estimated probabilities of belonging to each of the three classes based on the types of trauma that clients had reported. Class 1 consisted of individuals who had high probabilities of having endorsed each of the thirteen trauma items. It contained the largest number of participants (n = 53, 39.9%). The highest endorsed item in this class was having experienced torture. The lowest endorsed trauma item in class 1 was exposure to combat situations with an estimated probability of endorsement of 36%.

Class 2 consisted of clients who showed a lower probability of endorsing each trauma item when compared with the 'high risk' class. The highest endorsed item of this class was having been in danger of losing life. The least endorsed trauma was experiencing solitary confinement or isolation with a probable endorsement rate of 9.7%.

Class 3 reported the lowest probability for endorsing each of the trauma items. It contained the smallest number of participants (n = 33, 24.8%). This group endorsed only two out of a potential thirteen items. Clients in this class were characterised by deprivation of liberty and sexual assault or rape. As part of the analysis the three-class model was investigated to determine if class membership was a statistically significant predictor of psychotherapeutic need. The three-class solution consisted of latent classes labelled as high, medium, and low risk, which were tested to see if these were consistent with the categories of the therapy risk assessment scale.

The analysis found that the 3-class model was not a statistically significant predictor of any of the therapy needs categories. From this it can be said that class membership is not a salient predictor of psychotherapeutic need.

Discussion

Taken altogether, these findings indicate that Spirasi's existing therapy risk assessment tool is an appropriate model for assessing psychotherapeutic need for their clients. The analysis showed that a more detailed assessment of trauma, PTSD and C-PTSD would not significantly improve the prediction of a client's need. That is to say, whether an individual does or does not meet the threshold for diagnosis with either of these disorders does not determine their level of need.

Of the n = 133 client files analysed in this study, it was observed that the final need described on the IA forms did not always reflect the score that was recorded. The reason for this was that the collective, expert judgement of the IA team differed from the need that the scale indicated. For example, the scale does not account for factors such as social isolation, financial difficulties, legal stressors, family issues, length of time in the asylum process, and psychiatric history. These considerations are often apparent only after discussion with the client and are highlighted from the exchange between the team during the Care Plan. When the final level of need differs from that which is indicated by the assessment score the need level always increased. There were no instances in the sample in which a client's need was decreased.

Conclusion

Chapter 9 presented Spirasi's Therapy Needs Assessment scale, which informed the 3-class model of trauma exposed subgroups that were derived from the data. The Therapy Needs Assessment model, which assigns its clients to 'low', 'medium', and 'high' need categories based on a summative score and expert clinical judgment, was a key component of

the endeavour to assess traumatic exposure in relation to psychosocial need and mental health outcomes in the study sample.

Chapter 9 contextualised the 3-class trauma model with regard to Spirasi's Therapy Needs Assessment model. In doing so, a multinomial logistic regression was conducted, and it was found that clients who had a history of suicidality or self-harm and depression were more likely to be in the 'medium' need category. A history of suicidality or self-harm and depression were found to be statistically significant predictors of a medium need. Additionally, it was shown that clients who reported a history of suicidality or self-harm, depression, and current suicidal ideation, were more likely to be in the 'high' need category. However, both PTSD and C-PTSD were not found to be significant predictors of any of the needs categories. Furthermore, a multinomial logistic regression found that the latent class model was not a statistically significant predictor of any of the therapy needs categories.

Chapter Ten: Conclusion

This study explored how traumatic exposure, in combination with social stressors, particular those experienced in the host environment, affect mental health outcomes in asylum-seeking and refugee populations, particularly in Europe. Based on extant research and a comprehensive systematic review, it was predicted that there would be 15 significant variables that, as a whole, would explain psychosocial vulnerability for asylum seekers and refugees primarily in Europe.

In order to test the validity of the hypothesis, the practical component of this study was conducted in conjunction with the care centre for survivors of torture in the Republic of Ireland, Spirasi. In doing so, n = 133 service user files were randomly selected from years 2014 through 2017. It was shown that all of the clients whose data were included in this study were exposed to more than one traumatic event and these were largely assaultive and interpersonal, including torture, by government sanctioned organisations, individual civilians, and rebel groups. Service users presented with myriad psychological, somatic, and social difficulties owing to their experiences preceding, during, and after migration.

The study involved quantitative methodology and extracted data from pre-existing administrative files. Consent to use this data was obtained retroactively by the clinicians who gathered the data. Based on the systematic review conducted in Chapter 2, it was hypothesised that 3 latent classes of polyvictimised asylum seekers and refugees would be identified from the dataset and that (1) demographic variables (age, gender, number of children home/Republic of Ireland, and marital status) would be significant predictors of trauma class membership; (2) the level of common mental health disorders (anxiety, depression, and somatisation) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure; (3) the level of

trauma related health disorders (PTSD and DSO) would vary across the classes, with the highest levels being associated with the classes representing high levels of trauma exposure. The 3-class hypothesis was based on Spirasi's Therapy Needs Assessment model and derived from the relevant literature.

Chapter 1 introduced and explained the 'psychosocial' concept and explored the common and stress related mental health disorders encountered over the course of this research: PTSD, DSO (C-PTSD), depression and anxiety.

Chapter 2 presented a systematic review, which examined the most frequently cited post-migration stressors experienced by both asylum-seeking and refugee populations within Europe, and their associations with mental health problems in the context of resettlement into the host environment. It focused on the implications of post-migration stressors on psychological morbidity, with a view to understanding the most effective mechanisms for improving psychosocial well-being among these groups within the post-migration context.

Chapter 3 reviewed and described the experience of asylum seekers and refugees, primarily in Europe. This chapter surveyed the existing literature and studies which explored the experience of forced migration primarily across European nations. It described the variables related to demographic and migration characteristics of these populations as well as the type and frequency of traumas they are typically exposed to and the mental health outcomes for those applying for international protection in Europe.

Chapter 4 spoke to the practical component of this study. It described the care centre for survivors of torture in the Republic of Ireland, Spirasi, including the story and structure of the organisation. This chapter discussed the roles of the key workers at Spirasi, pathways of referral into the service and the key assessments and services offered by the organisation.

Chapter 5 elaborated the quantitative methodology used in this study. This chapter detailed the sampling and analytic techniques used in this study, including the inclusion and exclusion criteria for the data, population, sample size and sampling strategy; as well as self-report measures, instruments, and the ethical procedures implemented for this study.

Chapter 6 provided a detailed description of a sample of Spirasi's clients who accessed their services over a period of 48 months, from January 2014 to December 2017. It included basic demographic information of the organisation's service users as well as descriptive statistics relating to their migration characteristics, application stages, trauma exposure, therapy needs assessments scores, endorsement rates for somatic indicators, and probable diagnostic rates for PTSD, C-PTSD, depression and anxiety.

Chapter 7 incorporated a Latent Class Analysis (LCA) of the administrative data gathered from n = 133 service users files at Spirasi. This chapter identified three latent trauma classes from the data and labelled these 'low', 'medium', and 'high' risk classes.

Chapter 8 identified the predictors of class membership for each of the three latent classes. This chapter reviewed the existing literature on the predictors of traumatic exposure and conducted a Multinomial Logistic Regression to assess how common and stress related mental health disorders differ across the three classes of polyvictimised asylum seekers and refugees.

Chapter 9 contextualised the 3-class trauma model with reference to the original model from which it is derived: The Therapy Needs Assessment Scale. It examined, in detail, Spirasi's Therapy Needs Assessment model, which assigns its clients to 'low', 'medium', and 'high' needs categories based on a summative score and expert clinical judgment. A Multinomial Logistic Regression was conducted to test the hypothesised predictors of trauma class membership (age, gender, the number of children in the Republic of Ireland, number of

children abroad, marital/family status) and distal outcomes (somatic complaints, anxiety, depression, PTSD, and disturbances in self-organisation) in relation to the three-class trauma model.

Chapter 10 concludes this thesis with a discussion of the findings of the study. It explores the limitations encountered throughout and how this affected the outcomes of this study. Finally, this study will conclude by reflecting upon these findings and limitations and offering recommendations for future research related to assessing psychosocial vulnerability in asylum-seeking and refugee populations.

Discussion and Reflection

The aim of this thesis was to explore how traumatic exposure, in combination with social stressors, specifically those in the host environment, affects mental health outcomes in asylum-seeking and refugee populations predominantly in Europe. Over the course of this study it was shown that there were certain demographic information that were highly consistent across European states and these were reflected in this study. However, in other regards the data was challenging to the norm reported in the literature. While the descriptive statistics relating to gender, age, marital status, and country of origin reflected general research findings, when the data for prevalence rates for common and stress related mental health disorders were analysed the data were inconsistent with this.

Chapter 2 conducted a systematic review to answer the question of which post-migration variables have the most significant effect on the mental health of these populations in Europe. Across the 22 studies that were included in the review, it was shown that length of the asylum process was the most frequently cited stressor for mental health difficulties in the

post-migration phase. This was in line with the European norm for studies reporting post-migration difficulties experienced by asylum seekers and refugees.

It was, however, significant to note that legal status, which is the key characteristic separating asylum seekers and refugees, was not independently associated with mental health outcomes. This finding challenged the hypothesis that legal status would be significantly associated with mental health outcomes. Rather, it was shown to act as a marker for other explanatory variables. Since the majority of the sample (62.1%) were first time protection applicants in the Republic of Ireland, and their legal status was uncertain, from this it was predicted that the probability of diagnosis for common and stress related disorders would be disproportionately high. It was found that whilst rates of PTSD, C-PTSD, depression and anxiety were elevated across the 'low', 'medium', and 'high' risk classes, this was not explained by legal status. This finding was highly consistent with the literature reviewed.

However, the findings on the probability of PTSD and C-PTSD diagnoses were highly inconsistent with the literature. While PTSD and C-PTSD were reportedly the most prevalent mental health disorders among asylum-seeking and refugee populations, this study did not replicate this finding. Instead it was found that only 8.4% of the total sample reached the threshold for PTSD diagnosis and 9.2% for C-PTSD. Three reasons are hypothesised for this: (1) a larger sample size would have yielded different results and these results may have been consistent with the literature; (2) it is not uncommon for PTSD and C-PTSD prevalence rates to increase long after traumatic exposure; (3) it is not unusual for clients to filter their responses which means that summative scoring does not always reflect the truth of their experiences. Follow-up, longitudinal research is perhaps more appropriate in this instance.

While these findings reflect the literature in terms of the ratio of males to females presenting as asylum seekers and refugees in Europe, the results in relation to PTSD and

anxiety prevalence rates according to gender were highly inconsistent with the literature. Research shows that there are more male than female asylum seekers worldwide, but PTSD, anxiety, and depression are more prevalent among females than males. In the sample, the largest proportion of those meeting the threshold for diagnosis with PTSD and anxiety were males.

It may be theorised that (1) the sample size contained a disproportionately higher number of males than females (in comparison to the average study norm) and this affected the overall findings; (2) perhaps the findings are reflective of an important shift in the profiles of those entering the Republic of Ireland for protection. Endorsement rates for depression were the single mental health variable that concurred with the literature.

Despite the hypothesis that age, gender, number of children in the Republic of Ireland or abroad, and marital status would be predictors of the trauma classes, this was generally contested by the data. Although the literature indicated these to be significant predictors, the sample did not reflect this. Age was the single statistically significant predictor of class 2 membership. For every 1 unit increase in age, the probability of class 2 membership decreased. Similarly, probability of mental health outcomes was not found to be statistically significant. That is to say, trauma class membership did not presuppose mental health outcomes.

One of the most significant findings related to somatic indicators and mental health disorders. While the literature reported that somatoform disorders were primarily indicators of PTSD, this was untrue in this study. A multinomial logistic regression was conducted and found that somatic complaints were significantly elevated in each of the three latent classes, but PTSD was the least endorsed mental health disorder. Somatic complaints were most

prevalent for classes 1 and 2 which had the highest endorsement rates for depression and anxiety compared to PTSD and C-PTSD.

In relation to traumatic exposure, the data was typically in line with existing research. However, this was not true of the most frequently endorsed item in the sample. This item for both males and females was having been in danger of losing life. This finding was only replicated by one other study. However, it must be acknowledged that this item is unspecific and can only really be interpreted in the context of the remaining items which explain how participants were in danger of losing their lives. Assaultive, interpersonal traumas were characteristic of the highest endorsed trauma items which, again, are in line with reported norms. This was predicted at the outset of the study and is unsurprising given the nature of forced migration.

Limitations

One of the more obvious and most influential limitations in this research related to the sample size. 400 files were selected from cases seen by Spirasi from January 2014 through to December 2017, but the final number of useable files was 133. It was not viable to extract a sufficient amount of quality and reliable data from all 400 files for two main reasons: (1) each of the case files were hand written and in some cases notes were illegible and uninterpretable; (2) self-report measures and other data were missing or incomplete. It may be argued that this is a possible explanation for findings related to PTSD and C-PTSD prevalence rates in the sample and the gender differences related to endorsement rates. However, it would be premature to dismiss the possibility that the data reflects a divergent trend in the profiles of asylum seekers and refugees entering Europe.

Upon reflection, it is evident that this research would have benefited from an increased sample size, to compensate for the extent of missing data. Additionally, in retrospect, a stratified sampling technique may have yielded results that were more consistent with the literature. Since the significant proportion of the data related to asylum seekers, a stratified sampling procedure would have allowed us to ensure that refugees were not disproportionately represented. Moreover, this type of sampling would have allowed us to pre-select an equal number of males and females. This may have significantly altered the findings relating to gender differences for endorsement rates of PTSD, C-PTSD and anxiety.

Finally, given that the research was limited largely to European states, there was little discussion comparing practices with non-European nations regarding asylum seekers and refugees. This also limited knowledge on the role of age, since there were no substantial comparisons between older and younger age groups in the studies cited. However, it was found that there is some evidence pointing towards increased acculturative difficulties among older groups, but this finding is tentative and must be interpreted with caution.

Recommendations for Future Research

The aim of this thesis was to explore how traumatic exposure in combination with social stressors, specifically those in the host environment, affects mental health outcomes in asylum-seeking and refugee populations in Europe. To this end, a review of the literature was conducted, as well as embarking on a practical research component in this study. Over the course of this endeavour, 4 recommendations for future research in this area were identified:

(1) Additional research in this domain would certainly benefit from a larger sample size since, as remarked in the limitations section, a smaller sample will potentially affect research findings and outcomes.

(2) Findings suggest that a longitudinal study would yield more informative results particularly in relation to PTSD and C-PTSD prevalence rates in Spirasi. A longitudinal study, which would capture clients' self-report scores at baseline and at follow-up, would determine whether the findings were owing to the sample size or whether they represent a shift in Spirasi's client profiles compared to European norms. This will be a necessary and important point for the organisation to explore going forward.

(3) It is also recommended that primary data be used in future studies. One of the most significant limitations was reliance on secondary, administrative data, which ultimately affected the final sample size. It should be noted that additional use of primary data would allow the researcher to foresee and largely limit issues with missing data.

(4) A qualitative component would also be beneficial to future research in this area. Again, it is surmised that this would yield different results in relation to PTSD and C-PTSD prevalence which could be explored through post-doctoral research.

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